Funded by
the European Union

Sustainable Living Through The Lens

BOOKLET

Empower Plus

Funded by
the European Union

SUSTAINABLE LIVING THROUGH THE LENS

2023-1-RO01-KA210-YOU-000165862

Erasmus+ KA210 - Small-scale Partnerships Projects

Funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the ANPCDEFP. Neither the European Union nor the ANPCDEFP can be held responsible for them.

Participating Organisations:

- Empower Plus (Romania)
- Yenilikçi Eğitim Bilim ve Sanat Derneği (Türkiye)
- Association Internationale de Mobilisation pour l'Egalité - AIME (France)

Funded by the European Union

SUMMARY

Funded by
the European Union

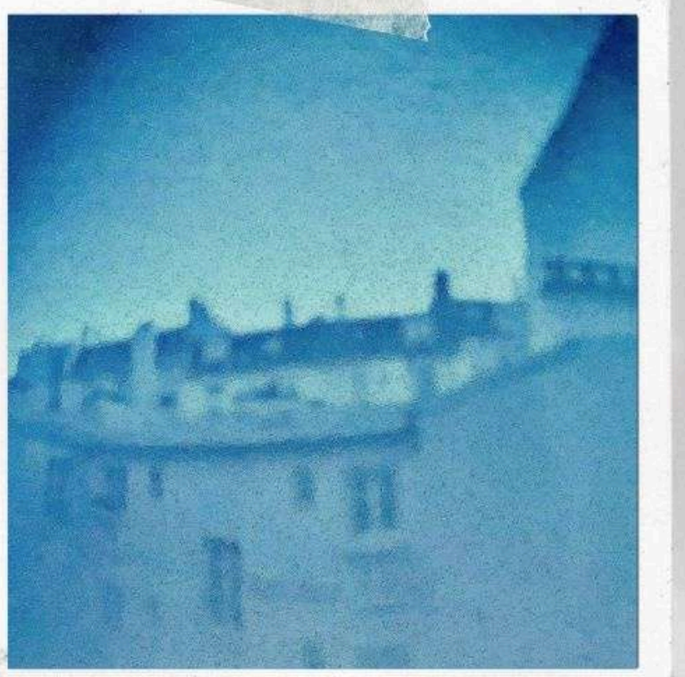
Funded by
the European Union

Collage with our solargraphy photos:

Sustainability

The

Through



Lens

1.1 The Erasmus+ Programme

The Erasmus+ Programme is the European Union's initiative to support education, training, youth, and sport across the continent. Launched to foster intra-European cooperation and mobility, Erasmus+ facilitates knowledge exchange and enriches the educational experiences of participants through cross-border learning opportunities. Also, by prioritising inclusivity, the programme aims to make learning abroad accessible to all, thus promoting equity in education and lifelong learning across diverse societal segments.

Erasmus+ conveys the EU's commitment to creating educational and professional pathways that cross national boundaries. It encourages participants to develop a broader understanding of European cultures and languages, and equips them with the skills necessary for the global job market. The programme's emphasis on partnership and cooperation among educational institutions, organisations, and individuals underlines its role in building a more cohesive and inclusive European identity. More details at: https://erasmus-plus.ec.europa.eu/ .

1.2. The Erasmus+ KA210 - Small-scale Partnerships Projects

The Erasmus+ KA210 - Small-scale Partnerships projects are designed to make the European education and training landscape more inclusive and accessible. Targeting smaller organisations and groups, these projects facilitate grassroots engagement with Erasmus+ objectives, fostering innovation and exchange in a more flexible and manageable framework. This initiative allows for the development of bespoke projects that address specific community needs, making European cooperation more tangible at the local level.

Small-scale Partnerships is an important support for organisations. These types of projects encourage participation from a wider array of stakeholders, thus enriching the Erasmus+ community with diverse perspectives and experiences. This inclusivity not only broadens the programme's impact but also fosters a deeper, more widespread engagement with the European project's core values of unity, learning, and cross-cultural exchange. More details at: https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/small-scale-partnerships

1.3. EU Programmes Related to the Environment

The European Union has long recognised the importance of environmental protection and sustainability, launching several programmes aimed at addressing these challenges. Initiatives such as the European Green Deal (https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en) and the LIFE Programme (https://cinea.ec.europa.eu/programmes/life_en) reflect the EU's comprehensive approach to fostering a sustainable future. The Green Deal sets ambitious targets for climate neutrality by 2050, while the LIFE Programme provides crucial funding for projects focused on environment and climate action, demonstrating the EU's commitment to leading global efforts in sustainability.

These programmes convey the EU's strategy to integrate environmental considerations into all aspects of policy-making and development. By prioritising investments in green technologies, sustainable infrastructure, and biodiversity conservation, the EU seeks to transition towards a more resilient and environmentally-friendly economy. The emphasis on collaboration and innovation within these initiatives highlights the role of collective action in overcoming environmental challenges, ensuring a healthier planet for future generations.

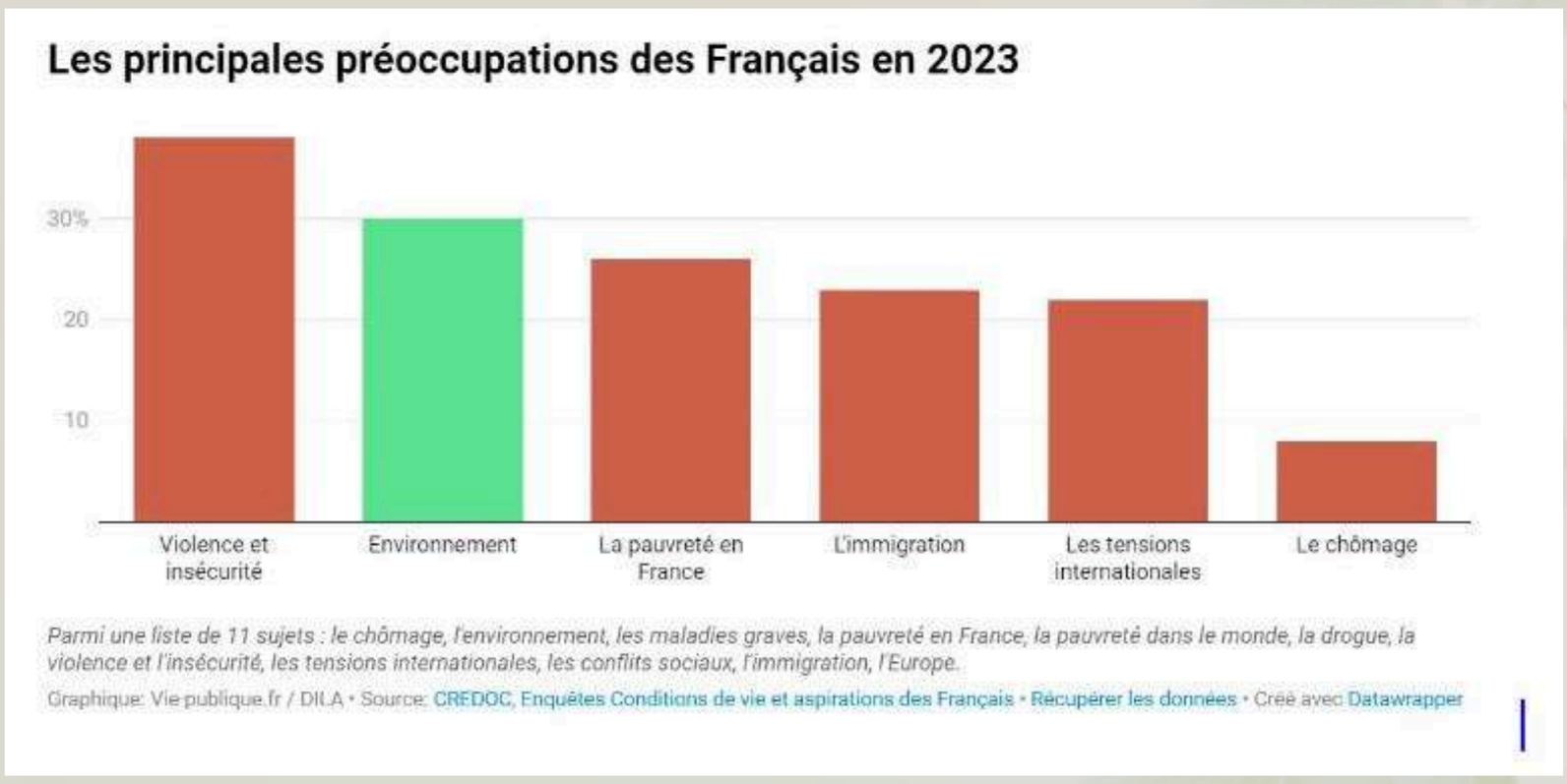
Photos from our Training Course:

Funded by
the European Union

1.4. The context for our project p.9

1.4.1. Environment Situation and Legislation in France

Recent opinion surveys show that the environment remains one of the major concerns of the French. These concerns translate into high expectations of public authorities in terms of environmental protection. Two figures illustrate this aspiration: 82% of French people support the idea that the fight against global warming should mobilize as many resources as the fight against the Covid-19 pandemic and 71% aspire to a society which would exclusively support economic activities virtuous for the environment [1]. The following graphic shows a the results of the main preocupations of french people in 2023, and it can be shown that the Environnement places in the second place, only after Violence and Insecurity:



The country has been actively engaged in promoting environmental awareness and sustainability through various measures and initiatives.

Defined in 1987 by the Brundtland Commission as "a development which meets the needs of the present without compromising the ability of future generations to meet theirs", the concept of sustainable development was enshrined by the first Earth Summit organized in Rio de Janeiro in 1992. Its goals ? to ensure economic and social progress for all by preserving the long-term natural and energy resources of the planet. That is to say, it is seen as a process which aims to reconcile the ecological, the economic and the social by establishing a sort of virtuous circle between these three aspects.

---

[1] Survey results CREDOC, July 2023 : https://www.credoc.fr/publications/sensibilite-a-lenvironnement-action-publique-et-fiscalite-environnementale-lopinion-des-francais-en-2023-synthese#:~:text=Ainsi%2C%2078%25%20des%20Fran%C3%A7ais%20estiment,inscrit%20dans%20les%20m%C3%AAmes%20tendances

From 1997, France, in application of the commitments made in Rio, developed a first “national sustainable development strategy”. After various institutional changes and updates throughout the years and according to the international contexts, The Ministry of Ecology, Sustainable Development and Energy was established in 2012. Within the Sustainable Development strategy and concept, France has focused its fights against climate change through new strategies that tend to balance sustainable development and economic growth. Hence, The National Strategy for Ecological Transition Towards Sustainable Development 2015-2020 was created and precedes the National Strategy for Sustainable Development 2010-2013, establishing a new course for sustainable development. This strategic shift towards ecological transition ensures alignment in public initiatives and promotes broader engagement with the pertinent challenges and solutions France has engaged.

This diagnosis pretends to present firstly a general panorama of the political strategy in France regarding sustainable development through the Ecological Transition perspective. Furthermore, this report will continue its analysis from an economic point of view and the impact sustainable development has had in the French global and local economy. It will then focus on the social point of view sustainable development has brought in France. To finalize, this section will share some recommendations and conclusions concerning this subject.

To begin with, it is important to focus and understand the concept of ecological transition France has developed since 2015 as an adapted way to fight climate change through public and private actions. The ecological transition is defined as “all the changes made to the economic and social model with the aim of meeting the requirements of sustainable development and reducing the ecological footprint of society”[2]. This ecological transition reflects the idea of a concrete approach to begin “here and now”, to better respond to the challenges of local and global environmental issues [3]. This concept appeared as a political will to align social , economical and political consensus to the sustainable development at a national scale, and it has been reinforced through the years and throughout political authorities.

---

[2]Makowiak, J. (2023). Transitions. *Revue juridique de l’environnement*, 48, 5-7. https://www.cairn.info/revue--2023-1-page-5.htm.

[3]Transition et développement durable - ENA bibliographie 2015 file:///C:/Users/PC/Downloads/bib_developpement_durable_2015-adb.pdf

Thus, putting climate issues and on the agenda generates a more marked transversality of political, administrative and legal temporalities: the introduction of the notions of urgency and immediacy into the law, marks a significant change[4]. Legislative acceleration and the reduction of procedural times are factors that industrial groups and the State are using at the national level to try to advance ecological transition projects more quickly. In France, it aims to reduce the length of procedures [5].

Finally, throughout 2023, The French President called on the French Department's local authorities to conduct ecological planning within their territories. To support them, the Ministry of Ecological Transition and Territorial Cohesion provides them with methods and tools. Due to their skills and their proximity to citizens and economic, social and associative actors, local authorities are essential members in the ecological transition. Ecological planning is a comprehensive method for meeting the five major challenges of the ecological transition [6]:

- Reducing greenhouse gas emissions and limiting the effects of climate change;
- Adaptation to the inevitable consequences of climate change / global warming;
- The preservation and restoration of biodiversity;
- Preservation of resources;
- Reducing pollution and its impact in people's health

Another important aspect to mention regarding ecological transition from a local point of view, is the participation of local communities and associations. In 2022, France had between 1,4 and 1,5 million active associations subdivided into various areas of intervention (Advocacy, culture, solidarity…) [7]. This nourished civil and citizen activities have allowed association to play a key role in developing new strategies to promote and reinforce sustainable development and ecological transition.

[4] [5] Laura Durand, Annaig Oiry et Angélique Palle, « La mise en politique de la transition énergétique : la durabilité à l'épreuve des conflits de temporalités », Temporalités [En ligne], 28 | 2018, mis en ligne le 04 avril 2019, consulté le 27 mars 2024. URL : http://journals.openedition.org/temporalites/5091 ; DOI : https://doi.org/10.4000/temporalites.5091

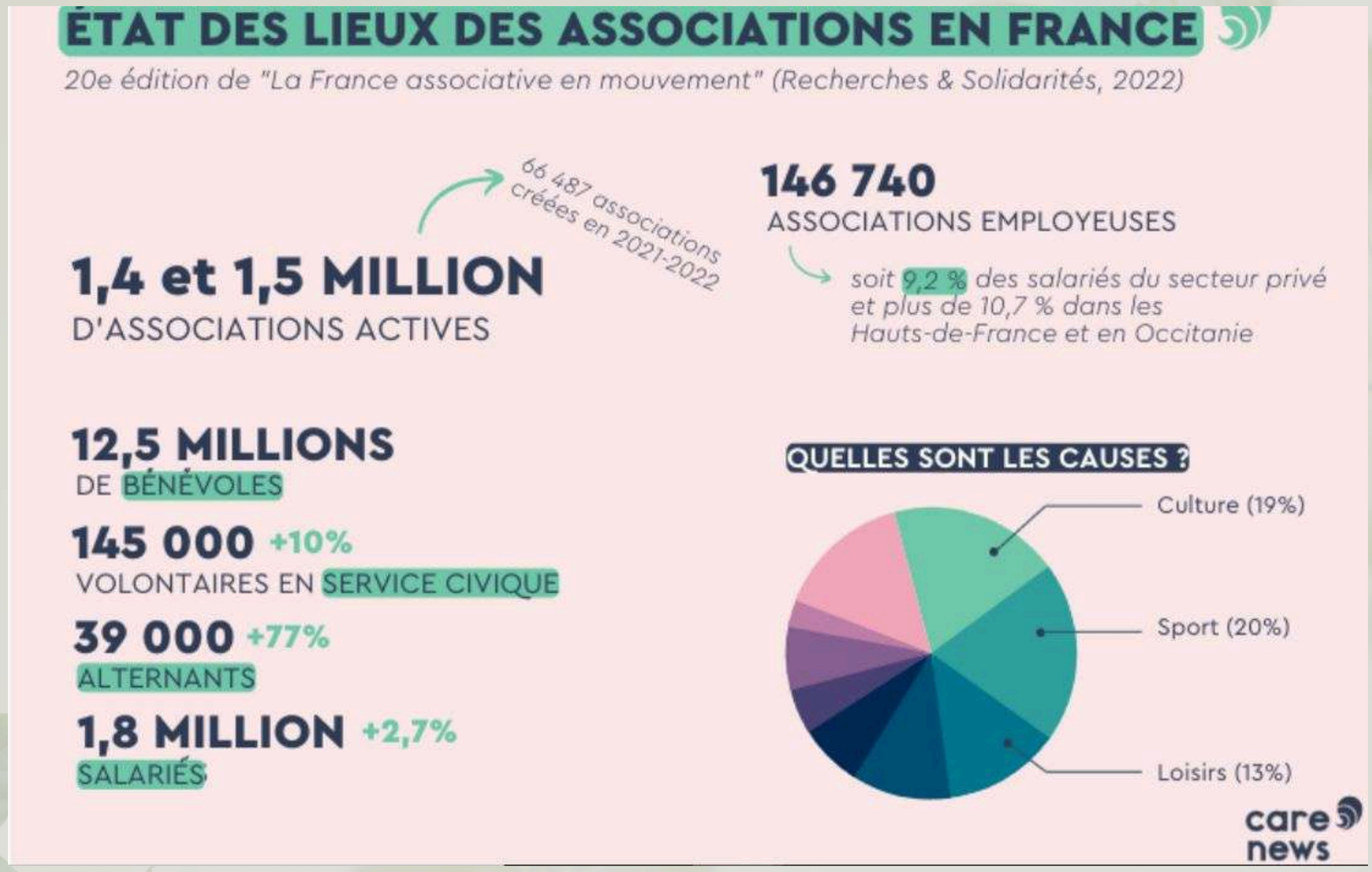
[6] Transition écologique des territoires : https://www.ecologie.gouv.fr/transition-ecologique-des-territoires

[7]Recherches & Solidarités vient de publier la 20e édition de son enquête « La France associative en mouvement 2022 » - Carenews - https://www.carenews.com/carenews-pro/news/associations-une-explosion-du-nombre-d-alternants-dans-les-structures-associatives

Associations, especially those focused on environmental solidarity, both nationally and internationally, are actively engaged on various fronts. They address social issues with ecological solutions, often promoting awareness of these problems. For instance, French association Emmaüs has been advocating for reuse and recycling since the 1950s, while the Secours Populaire has been rescuing food surpluses since the 1970s. In Lyon, the Foyer Notre-Dame des Sans-abri began with initiatives aimed at providing shelter for the homeless.

The people they are targeting, who face economic, social and professional barriers, have always practiced saving out of necessity: saving water and electricity, buying second-hand items, repairing instead of replacing, salvaging unsold goods, and using public transportation instead of cars. Even today, while this frugality may not be seen as a strict model or imposed on others, it can still be inspiring.

For several decades, the associative sector has served as a fertile ground for generating solutions, providing ecological solutions to social challenges and social responses to ecological issues. These efforts must deserve greater recognition and support. While some initiatives locally transform territories, others hold the potential to become transferable, capable of triggering beneficial effects on a larger scale and serving as models for public policy implementation.



The graphic above shows us a state of art of the Associations in France in 2022. From the 1,4 and 1,5 million associations present in the country, 66 487 were created between 2021 and 2022.

Furthermore, the country can count on 12,5 million volunteers to help develop these organizations, 1,8 million working people, 145 000 young volunteers under the French Civic Service contract, and 39 000 students under a pre-professional contract.

As this introductory diagnosis shows, France has witnessed a constant evolution of public policies and social participation regarding Sustainable Development.

It is also important to focus and analyse the economic evolution and impact of implementing and encouraging Sustainable Development and the Ecological Transition in France.

According to a study published on July 11, 2023 on the acceptability of environmental measures, carried out using data from the Opinion Barometer of the Department of Research, Studies, Evaluation and Statistics (Drees)[8], 57% of Ile-de-France residents are in favour of increasing the carbon tax, compared to 20% of residents of rural communities and almost a third of residents. other urban units.

In a time when prices are rising fast and many people feel financially uncertain, worries about the environment are still very important. People are increasingly paying attention to environmental problems and their impact on society.

Many French citizens are hesitant to accept new taxes for environmental protection. Thus, 53% of those questioned do not wish to pay more taxes whatever the use (+3 points compared to 2022) and only 19% adhere to the idea of an environmental tax (-5 points). Support for a carbon tax is also decaying, even if 56% of the population could agree to the implementation of such a tax under certain conditions (financing of measures in favour of the transition, redistribution to low- and middle-income categories, reduction of other taxes)[9].

---

[8] [9] Mesures environnementales : une plus grande acceptabilité au sein des catégories socialement favorisées et des ménages franciliens ÉTUDES ET RÉSULTATS, N° 1274,11/07/2023 https://drees.solidarites-sante.gouv.fr/publications-communique-de-presse/etudes-et-resultats/mesures-environnementales-une-plus-grande

France has been implementing several measures at an economic level to facilitate the evolution and its ecological transition. To achieve this goal, it requires mobilizing all private and public actors (households, businesses, State, operators, local authorities, European Union, international financial institutions, etc.) and reviewing their modes of production, consumption, travel, housing. The transition also requires decarbonizing our economic model and industrial flows and commercial, to escape our dependence on fossil fuels.

This is an non exhaustive list of the measures taken nationally to implement a sustainable economy [10] :

- Support companies in their ecological footprint and transition (good practises, ecological digital planning and harmonizing the European framework)
- Encourage companies to integrate the environmental dimension in their strategy
- Develop environmental criteria in public procurement and tender procedures
- Decarbonize our imports thanks to the mechanism border carbon adjustment
- Better assess the environmental impact public policies

European Union trade agreements. It played an active role in numerous negotiations: European regulation against deforestation and degradation of forests, subsidies for illegal fishing and overfishing, integration of biodiversity in the multilateral trading system, or the 15th Conference of the Parties (COP) of the Convention on Biological Diversity [11].

Furthermore, France aids companies in their shift towards ecological practices, guiding them to adopt more sustainable approaches. Acting as a responsible stakeholder, the ministry also exerts direct influence on publicly-owned enterprises to embrace environmentally friendly practices.

Although the government is implementing economical measures to reduce the impact of pollution in the territory, it is also developing a new strategy regarding circular economy.

---

[10] [11] Ministère de l'Economie, des finances, de la Souveraineté Industrielle et Numérique - France Nation Verte - https://www.economie.gouv.fr/files/files/2023/Brochure_rdv_Bercy.pdf

According to the definition provided by the European Parliament, circular economy is *"a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.*

In practice, it implies reducing waste to a minimum. When a product reaches the end of its life, its materials are kept within the economy wherever possible thanks to recycling. These can be productively used again and again, thereby creating further value.

This is a departure from the traditional, linear economic model, which is based on a take-make-consume-throw away pattern. This model relies on large quantities of cheap, easily accessible materials and energy." [12]

The circular economy model:
less raw material, less waste, fewer emissions

Source: European Parliament Research Service

The European Parliament points out that adopting practices of reusing and recycling can effectively mitigate the reduction of natural resources, minimize destruction to landscapes and habitats, and contribute to preserving biodiversity in environmental conservation efforts. Furthermore, transitioning to a circular economy offers an added benefit of reducing overall annual greenhouse gas emissions. As indicated by the European Environment Agency, industrial processes and product utilization currently contribute to 9.10% of greenhouse gas emissions in the EU, while waste management accounts for 3.32%. [12]

Creating more efficient and sustainable products from their conception can significantly reduce energy and resources consumption. Most of a product's environmental impact is typically determined during its design phase. Hence, it is encouraged to use products with greater durability that are reusable, upgradable, and repairable. It would therefore lead to a decrease in waste generation. Packaging emerges as a notable concern, prompting efforts to address excessive packaging and improve its design to promote reuse and recycling.

Given the escalating global population and subsequent demand for limited resources, reducing reliance on raw materials is imperative. Such reliance often needs imports from other nations. The value of raw material trade between the EU and other regions has nearly tripled since 2002, resulting in a trade deficit of €35.5 billion in 2021, underscoring the importance of reducing dependency on raw materials [13].

Recycling raw materials helps manage supply risks like price changes and import reliance, especially for critical materials needed in climate-related technologies like batteries and electric engines. . Transitioning to a circular economy can boost competitiveness, innovation, economic growth, and job creation.

Redesigning products for circularity fosters innovation, offering consumers better quality, more durable goods, and long-term cost savings.

---

[12] [13] Circular economy: definition, importance and benefits - 24/05/2023 - https://www.europarl.europa.eu/topics/en/article/20151201STO05603/circular-economy-definition-importance-and-benefits

In France, In 2020, France enacted a comprehensive law aimed at facilitating a shift towards a circular economy at a systemic level. Known as the Anti-waste Law, it encourages businesses spanning various industries, local authorities, and individuals to minimize waste generation and embrace circular practices. Additionally, the law seeks to foster societal change and bolster the solidarity economy. Pioneering measures within the law include the prohibition of destroying unsold goods and the introduction of a repairability index, setting a global precedent. Originating from France's commitments to mitigate climate change and driven by successive national policies such as the 2015 Energy Transition Law for Green Growth and the 2017 French Climate Plan, the law signifies a significant step towards achieving sustainability objectives [14].

The law aims to:

- phase out single-use plastic packaging by 2040;
- eliminate waste by encouraging reuse and supporting charitable organisations;
- tackle planned obsolescence;
- promote a better resource management system from the design stage to the recovery of materials;
- provide better and more transparent information to consumers.

The legislation has implemented numerous measures, some of which are unprecedented globally, to drive the shift towards a circular economy. France stands out as the pioneer in banning the destruction of unsold non-food items. Instead of disposing of them in landfills or incinerating them, companies are now mandated to either reuse, donate, or recycle their surplus products.

Furthermore, France has taken the lead in implementing a mandatory repairability index for electronic and electrical products such as smartphones, laptops, washing machines, and televisions. This initiative is aimed at increasing the rate of product repairs by prompting manufacturers to consider repairability during the design phase and informing consumers about repair options at the time of purchase.

In addition to these measures, the law aims to catalyse societal change by generating new employment opportunities and supporting the solidarity economy.

By establishing funds to facilitate the creation of 70,000 jobs within reuse networks and promoting the donation of surplus goods to charitable organizations, France is actively advocating circular solutions to assist individuals facing precarious circumstances [14].

Conclusions :

It is on the European scale that public policies on a long-term perspective are constructed. Their implementation involves in particular a certain number of “major projects”, qualified to be “of common interest” for the entire Union. These projects are often controversial due to the fact that they exclude in their implementation the consideration of local demands. The project leaders see it from a long-term perspective, while local stakeholders view it in the short term. Hence, local participants feel the consultation phases as an illusion in the face of a project “already decided”, without them.

At a national level, France has been a key player in international climate agreements, including the Paris Agreement. It was however late in committing itself to the path to sustainable development, on three registers: the Rio Political Declaration, Agenda 21 and new types of multilateral environmental agreements. The government has committed to reducing greenhouse gas emissions and transitioning towards renewable energy sources. To sum up :

- Renewable Energy Development: France has been investing in renewable energy sources such as wind, solar, and hydroelectric power to reduce its reliance on fossil fuels and nuclear energy. There are various incentives and subsidies in place to promote the adoption of renewable energy technologies.
- Biodiversity Conservation: Efforts to preserve biodiversity in France include the establishment and management of national parks, nature reserves, and protected areas. These areas serve to safeguard ecosystems, habitats, and endangered species.

---

[14] Ellen McArthur Foundation - Circular example - France’s anti waste and circular economy, 12/09/2023 https://emf.thirdlight.com/file/24/kLSzgopkL.2CJxQkLb3XkLQlS7_/Case%20Studies%20-%20French%20Anti%20Waste%20Law.pdf

- Waste Management and Recycling: France has implemented policies to reduce waste generation and increase recycling rates. Measures include waste sorting programs, extended producer responsibility schemes, and bans on single-use plastics.
- Public Transportation and Urban Planning: To reduce carbon emissions from transportation, France has been investing in public transportation infrastructure, including railways, buses, and bicycle lanes. Urban planning initiatives prioritize sustainable development, with an emphasis on reducing congestion and promoting walkable cities.
- Environmental Education and Awareness: France has integrated environmental education into school curricula and promotes awareness campaigns to engage citizens in sustainable practices. Initiatives such as Earth Hour and World Environment Day are supported by the government and civil society organizations.
- Circular Economy Initiatives: France is promoting the transition to a circular economy model, which aims to minimize waste and maximize resource efficiency. This includes measures to encourage eco-design, repairability, and the reuse of products.
- Carbon Pricing and Environmental Taxes: France has implemented carbon pricing mechanisms and environmental taxes to internalize the costs of pollution and incentivize sustainable behavior among businesses and consumers.
- Research and Innovation: France supports research and innovation in environmental technologies and solutions through funding programs and partnerships with academic institutions and industry.

This last image aims to present the current chronology of laws and actions currently designed and implemented in France regarding Sustainable Development and Circular economy : [15]

[15] Ellen McArthur Foundation - Circular example - France’s anti waste and circular economy, 12/09/2023 https://emf.thirdlight.com/file/24/kLSzgopkL.2CJxQkLb3XkLQlS7_/Case%20Studies%20-%20French%20Anti%20Waste%20Law.pdf

Funded by
the European Union

Timeline of previous policies:

2015 — Adoption of the *Energy Transition Law for Green Growth*

2016 — Adoption of the *"Garot law"* on the fight against food waste

2017 — Emmanuelle Macron's presidential programme sets plastic recycling and landfilling reduction targets

July 2017 — France's *Climate Plan* is adopted and states the publication of a *Circular Economy Roadmap* in 2018

Sept 2017 — Brune Poirson announced the launch of the French *Roadmap For A Circular Economy* at the 2017 Assises des Déchets

Oct 2017 — Launch of the work on the *Circular Economy Roadmap* and public consultation

Development of the roadmap

April 2018 — Publication of France's *Roadmap for a Circular Economy*

Development of the draft law

July 2019 — Presentation of the draft law at the council of Ministers

Sept 2019 — Reading of the law in the Senate

Dec 2019 — Reading of the law at the National Assembly

Jan 2020 — Mixed Parity Committee

Development of decrees and implementation

Feb 2020 — Adoption of the French *Anti-waste Law*

Feb 2021 — Presentation of the draft *Climate and Resilience Law*

2040

1.4.2. Environment Situation and Legislation in Turkyie - ECOLOGY IN TÜRKİYE

·Türkiye’s Ecological Diversity

Situated at the crossroads of Europe and Asia, Türkiye boasts a remarkable tapestry of ecological diversity, encompassing a rich array of ecosystems ranging from lush forests and coastal wetlands to rugged mountains and expansive steppes, each harboring a unique assemblage of flora and fauna shaped by millennia of geographic, climatic, and cultural influences.

Introduction to Türkiye's diverse ecosystems:

1. The forests of Türkiye cover approximately 27% of the country's land area, consisting of deciduous and coniferous forests. The Mediterranean region is known for its maquis and garrigue vegetation, while the Black Sea region is characterized by temperate rainforests.
2. Coastal areas along the Aegean and Mediterranean coasts feature diverse marine habitats, including seagrass meadows, coral reefs, and nesting sites for marine turtles.
3. Türkiye's mountains, such as the Taurus Mountains and the Eastern Anatolian Mountains, support alpine ecosystems with unique flora and fauna adapted to high altitudes.
4. Steppes and grasslands are found in the central and eastern parts of Türkiye, supporting a variety of grasses, herbs, and grazing mammals.

Unique flora and fauna found in different regions:

1.Türkiye is home to a remarkable diversity of plant and animal species, with many endemic species found nowhere else in the world. Examples of endemic species include the Anatolian leopard, the Turkish fir tree (Abies nordmanniana), and the Anatolian wildcat (Felis silvestris lybica).

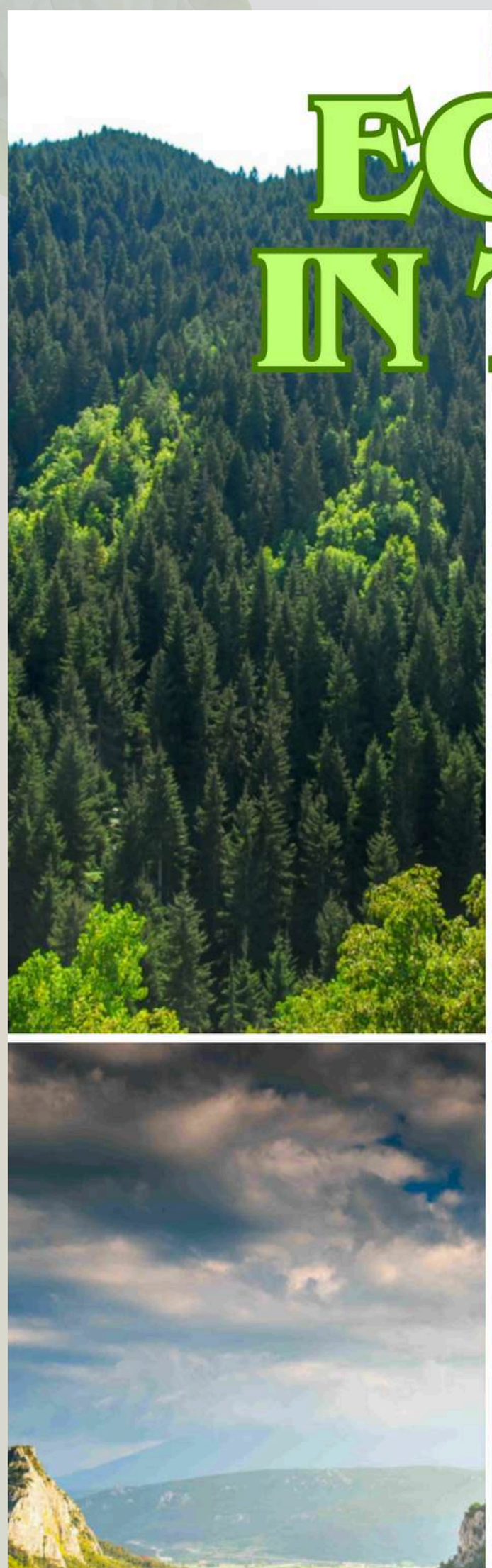
2.The Mediterranean region of Türkiye is known for its rich floral diversity, with species such as the Anatolian orchid (Orchis anatolica), the Anatolian sage (Salvia recognita), and the Turkish cyclamen (Cyclamen coum).

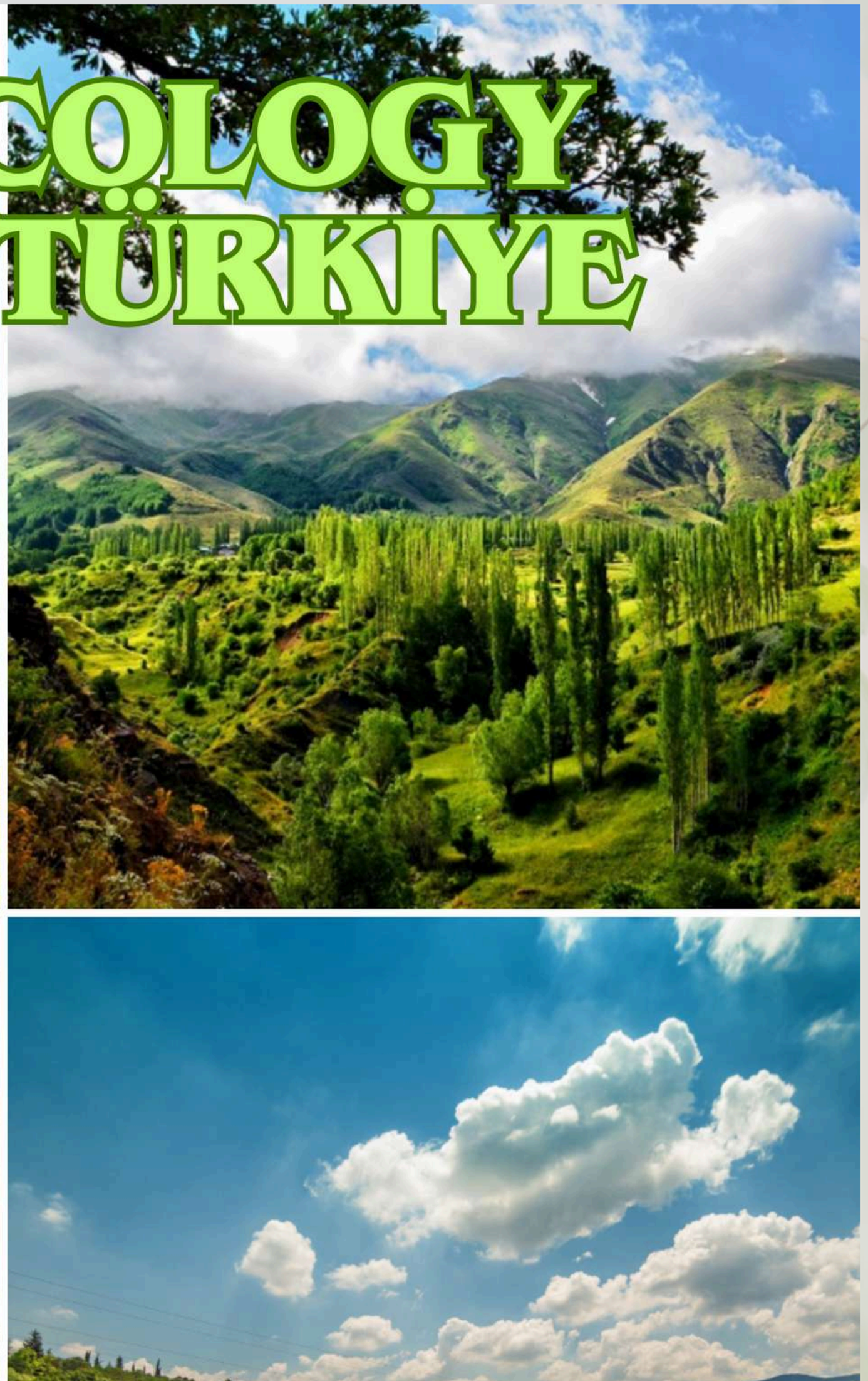
3.The Anatolian plateau is inhabited by unique mammals like the Turkish tortoise (Testudo graeca anamurensis) and the Anatolian brown bear (Ursus arctos anatolicus), as well as bird species like the Anatolian rock sparrow (Petronia petronia).

4.Notable biodiversity hotspots in Türkiye include the Kızılırmak Delta, which supports a variety of bird species including flamingos and pelicans, and the Yedigöller National Park, known for its seven interconnected lakes and diverse plant communities.

Funded by
the European Union

ECOLOGY IN TÜRKİYE





The importance of biodiversity for ecological balance and human well-being:

1. Biodiversity is essential for maintaining ecological balance and stability within ecosystems. It contributes to ecosystem services such as pollination, nutrient cycling, and pest control, which are vital for human survival.
2. Türkiye's rich biodiversity also has cultural significance, as many species are deeply integrated into local traditions, folklore, and cuisine. For example, the tulip holds cultural significance in Turkish art and literature, while the Anatolian shepherd dog (Kangal) is revered for its role in livestock protection.
3. Economically, biodiversity supports sectors such as agriculture, forestry, fisheries, and tourism, providing livelihoods for millions of people in Türkiye. Ecotourism, in particular, is a growing industry that relies on intact ecosystems and wildlife habitats.
4. Protecting biodiversity is crucial for human health, as healthy ecosystems provide clean air, clean water, and natural resources that support human well-being. Conserving biodiversity helps to mitigate the impacts of climate change, reduce the spread of infectious diseases, and enhance resilience to natural disasters.

- **Threats to Türkiye's Ecosystems**

Despite its natural beauty and ecological richness, Türkiye's diverse ecosystems face an array of daunting challenges, including habitat loss from rapid urbanization, pollution stemming from industrial activities and agricultural runoff, the looming specter of climate change with its attendant impacts on temperature, precipitation patterns, and extreme weather events, as well as the relentless pressure of overexploitation of natural resources, all of which converge to imperil the delicate balance of Türkiye's ecological integrity and biodiversity.

Habitat Loss:

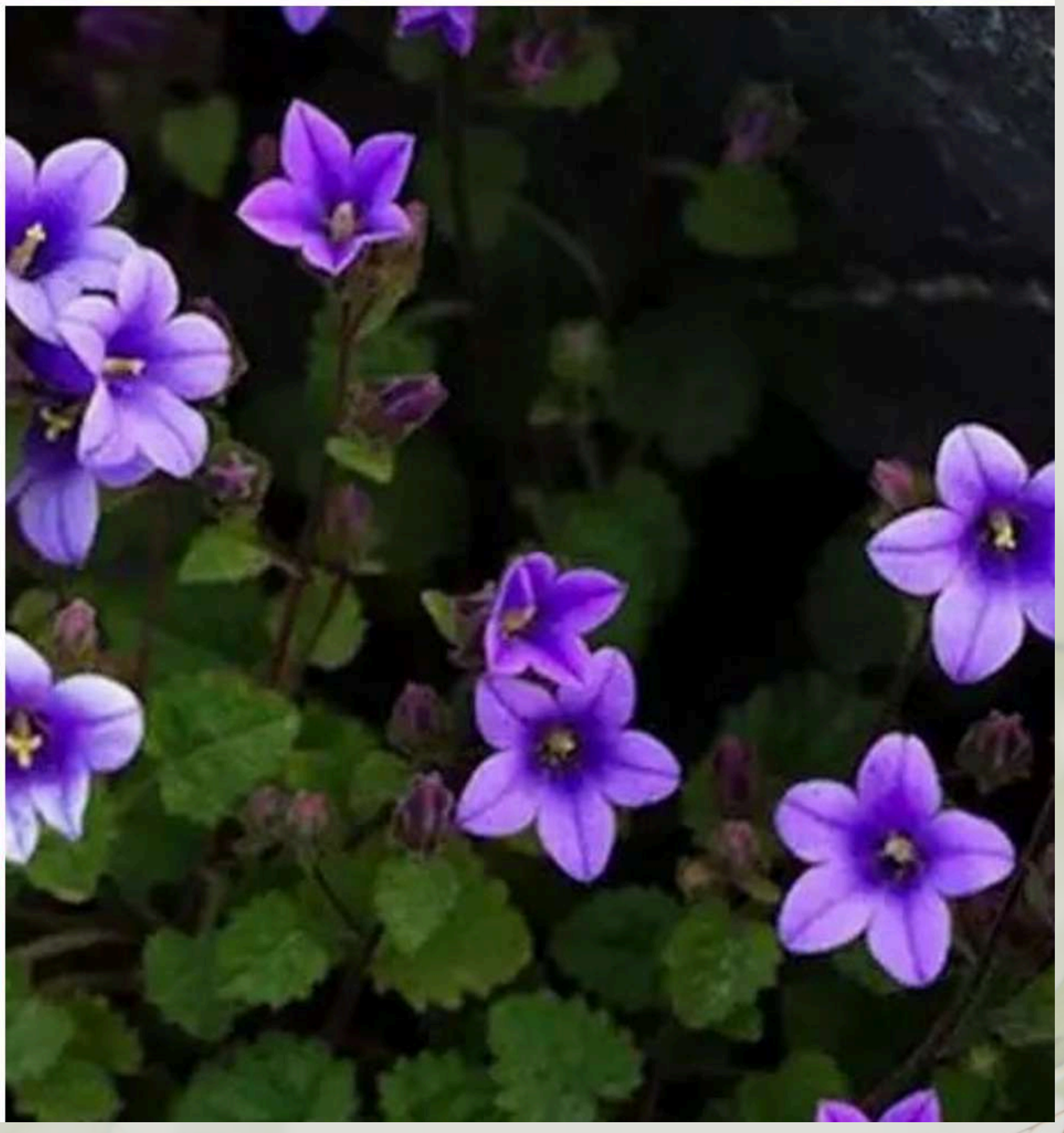
Rapid urbanization and infrastructure development have led to the loss and fragmentation of natural habitats across Türkiye. Expansion of agricultural land, industrial zones, and tourism infrastructure encroaches upon forests, wetlands, and coastal areas. Conversion of natural habitats for human use reduces available habitat for wildlife, disrupts ecological processes, and diminishes biodiversity.

Pollution:

Pollution from industrial activities, agriculture, transportation, and urban areas contaminates air, water, and soil in Türkiye. Industrial emissions, untreated wastewater discharge, and agricultural runoff contribute to water pollution, affecting rivers, lakes, and coastal ecosystems. Air pollution from vehicle emissions, industrial processes, and

Funded by
the European Union

ECOLOGY IN TÜRKİYE

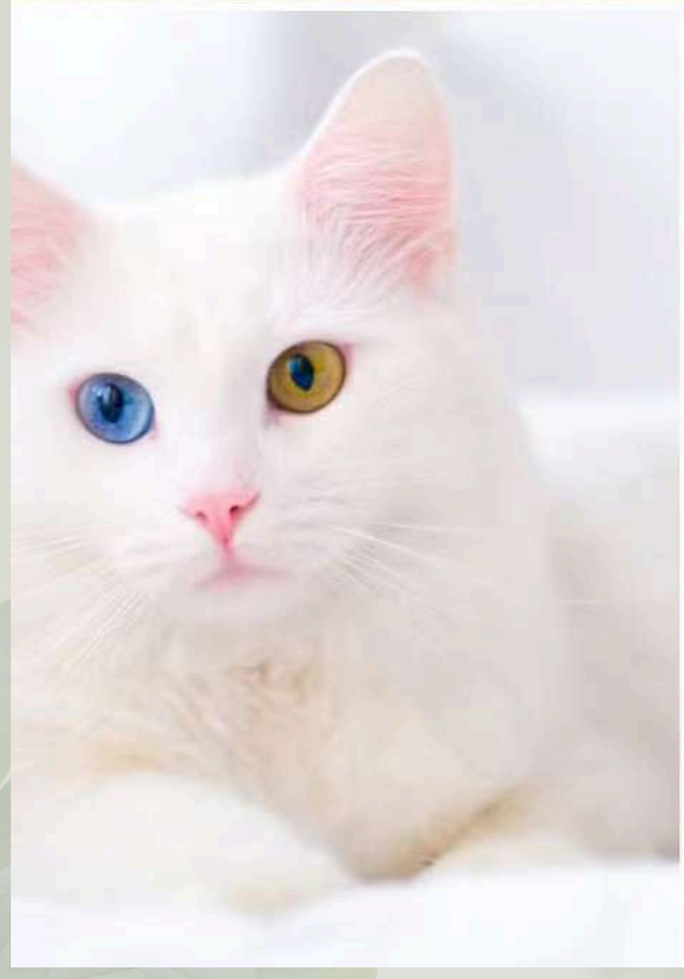


Empower Plus

Funded by
the European Union

Sustainable Living Through The Lens

ECOLOGY IN TÜRKİYE



Empower Plus

biomass burning impacts human health and ecosystems, leading to respiratory problems, acid rain, and habitat degradation.

Climate Change:
Türkiye is experiencing the impacts of climate change, including rising temperatures, changing precipitation patterns, and extreme weather events. Shifts in temperature and rainfall regimes affect the distribution and abundance of plant and animal species, leading to changes in ecosystem composition and functioning. Glacier retreat, sea-level rise, and increased frequency of droughts and wildfires pose threats to water resources, coastal ecosystems, and agricultural productivity.

Overexploitation of Natural Resources:
Unsustainable exploitation of forests, fisheries, and wildlife resources contributes to habitat degradation and species decline. Illegal logging, overfishing, and poaching threaten the survival of endangered species and disrupts ecosystem dynamics. Unsustainable harvesting of medicinal plants, herbs, and non-timber forest products depletes natural resources and undermines ecosystem resilience.

Invasive Species:
Introduction of invasive alien species poses a significant threat to native biodiversity in Türkiye. Invasive plants, animals, and pathogens outcompete native species, alter ecosystem structure and function, and disrupt ecological balance. Invasive species can spread rapidly and cause ecological and economic harm, leading to loss of biodiversity and ecosystem services.
Addressing these threats requires comprehensive strategies and collaborative efforts involving government agencies, non-governmental organizations, local communities, and the private sector. Conservation actions such as habitat restoration, protected area management, pollution control, sustainable resource management, and climate change adaptation are essential for safeguarding Türkiye's ecosystems and biodiversity.

- **Conservation Strategies and Policies**

In response to the urgent need to safeguard its invaluable natural heritage and preserve its ecological integrity for future generations, Türkiye has implemented a multifaceted array of conservation strategies and policies, characterized by a combination of robust environmental legislation, the establishment of protected areas and national parks, proactive community-based initiatives, active participation in international conservation agreements, and comprehensive environmental education and awareness programs, collectively reflecting Türkiye's steadfast commitment to promoting sustainable development and biodiversity conservation across its diverse landscapes.

Funded by
the European Union

ECOLOGY IN TÜRKİYE

Funded by
the European Union

ECOLOGY IN TÜRKİYE

Environmental Legislation and Regulatory Frameworks:

Türkiye has established comprehensive environmental legislation and regulatory frameworks to protect its natural resources and biodiversity. The Environmental Law (No. 2872) enacted in 1983 provides the legal basis for environmental protection and conservation efforts in Türkiye. Other key legislative instruments include the Conservation of Nature and Biodiversity Law (No. 2873), the Forestry Law (No. 6831), and the Environmental Impact Assessment Regulation. These laws and regulations aim to regulate land use, prevent pollution, promote sustainable development, and conserve natural habitats and species.

Protected Areas and National Parks:
Türkiye has established a network of protected areas, including national parks, nature reserves, wildlife sanctuaries, and special environmental protection areas. As of 2024, Türkiye has 49 national parks and 31 nature reserves. These protected areas serve as refuges for biodiversity, conserve important ecosystems, and provide opportunities for scientific research, education, and ecotourism. Examples of notable national parks in Türkiye include Göreme National Park, Olympos Beydağları National Park, and Köyceğiz-Dalyan Special Environmental Protection Area.

Community-Based Conservation Initiatives:
Community engagement and participation play a crucial role in conservation efforts in Türkiye. Local communities, indigenous peoples, and stakeholders are involved in decision-making processes, natural resource management, and sustainable development initiatives. Community-based conservation projects empower local communities to take ownership of conservation activities, promote traditional ecological knowledge, and support livelihoods while conserving biodiversity. Examples of community-based conservation initiatives in Türkiye include community-managed forests, cooperatives for sustainable agriculture and fisheries, and eco-tourism enterprises.

International Cooperation and Partnerships:
Türkiye actively participates in international conservation initiatives, agreements, and partnerships to address transboundary environmental challenges and promote biodiversity conservation. Türkiye is a signatory to international conventions and agreements such as the Convention on Biological Diversity, the Ramsar Convention on Wetlands, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Through international cooperation, Türkiye collaborates with other countries, organizations, and stakeholders to share knowledge, resources, and best practices for conservation and sustainable development.

Funded by
the European Union

Sustainable Living Through The Lens

ECOLOGY IN TÜRKİYE

Funded by
the European Union

Sustainable Living Through The Lens

ECOLOGY IN TÜRKİYE

Environmental Education and Awareness Programs:

Environmental education and awareness programs are essential for fostering a culture of conservation and sustainability in Türkiye. Government agencies, non-governmental organizations, schools, universities, and civil society organizations organize educational campaigns, workshops, and outreach activities to raise awareness about environmental issues and promote environmental stewardship. Environmental education initiatives aim to empower individuals, communities, and future generations to make informed decisions, adopt environmentally friendly behaviors, and contribute to conservation efforts.

These conservation strategies and policies demonstrate Türkiye's commitment to protecting its natural heritage, conserving biodiversity, and promoting sustainable development for present and future generations. Continued collaboration and concerted efforts are needed to address emerging conservation challenges and ensure the long-term health and resilience of Türkiye's ecosystems.

1.4.3. Environment Situation and Legislation in Romania

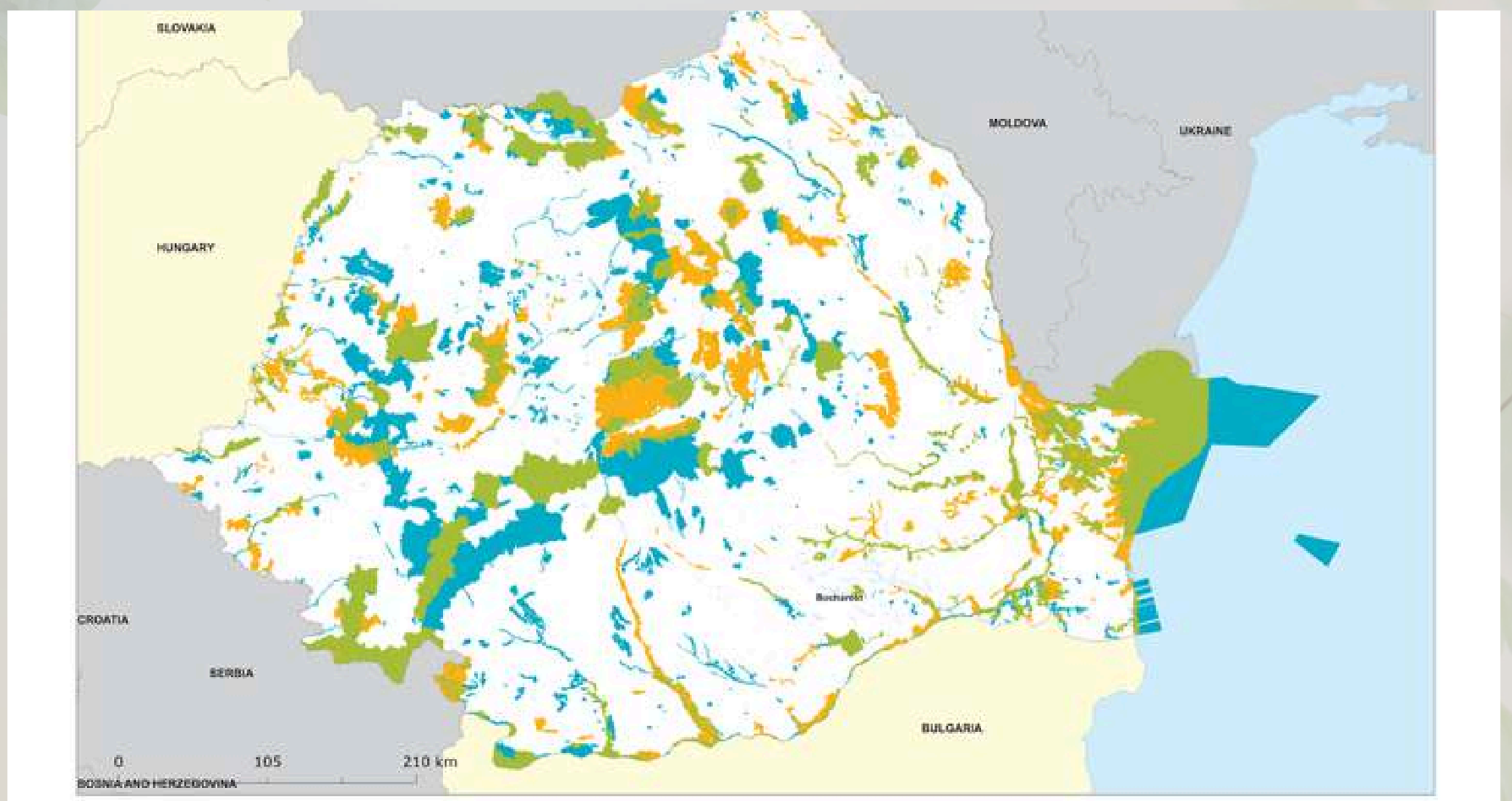
Romania, with its diverse natural landscapes ranging from the Carpathian Mountains to the Danube Delta, faces several environmental challenges and opportunities. As part of the EU, Romania has adopted a suite of environmental legislation, in order to protect natural habitats, preserve biodiversity, and mitigate climate change impacts. Initiatives have focused on reducing pollution, promoting sustainable resource use, and enhancing the country's resilience to environmental risks.

The country has made significant strides in integrating EU environmental directives into national law, striving to balance development with ecological preservation. Efforts to improve waste management, increase energy efficiency, and encourage renewable energy sources reflect Romania's commitment to sustainable development. However, challenges remain in fully implementing these policies, necessitating ongoing efforts to align economic growth with environmental sustainability.

In the realm of conservation, Romania is home to some of Europe's most significant natural treasures, which are protected under national and EU legislation. The management of protected areas, such as national parks and Natura 2000 sites, are very important for preserving Romania's unique biodiversity. These efforts are complemented by EU-funded projects aimed at habitat restoration and species protection, showcasing the potential for successful collaboration between national authorities and the European community.

Natura 2000 sites is a network of nature protection areas within the European Union, established under the EU's Habitats Directive and Birds Directive (https://www.eea.europa.eu/en/datahub/datahubitem-view/6fc8ad2d-195d-40f4-bdec-576e7d1268e4). It represents the largest coordinated network of protected areas in the world, aiming to assure the long-term survival of Europe's most valuable and threatened species and habitats. Natura 2000 sites span across all member states, covering significant land and marine areas. These sites are not just sanctuaries for biodiversity but also places where compatible human activities and sustainable practices are encouraged to maintain or restore the natural habitats and species to a favourable conservation status. The network plays a crucial role in the EU's commitment to halt biodiversity loss and build resilience against climate change, showcasing a balanced approach to conservation that integrates ecological needs with socio-economic activities.

Natura 2000 sites - Romania:

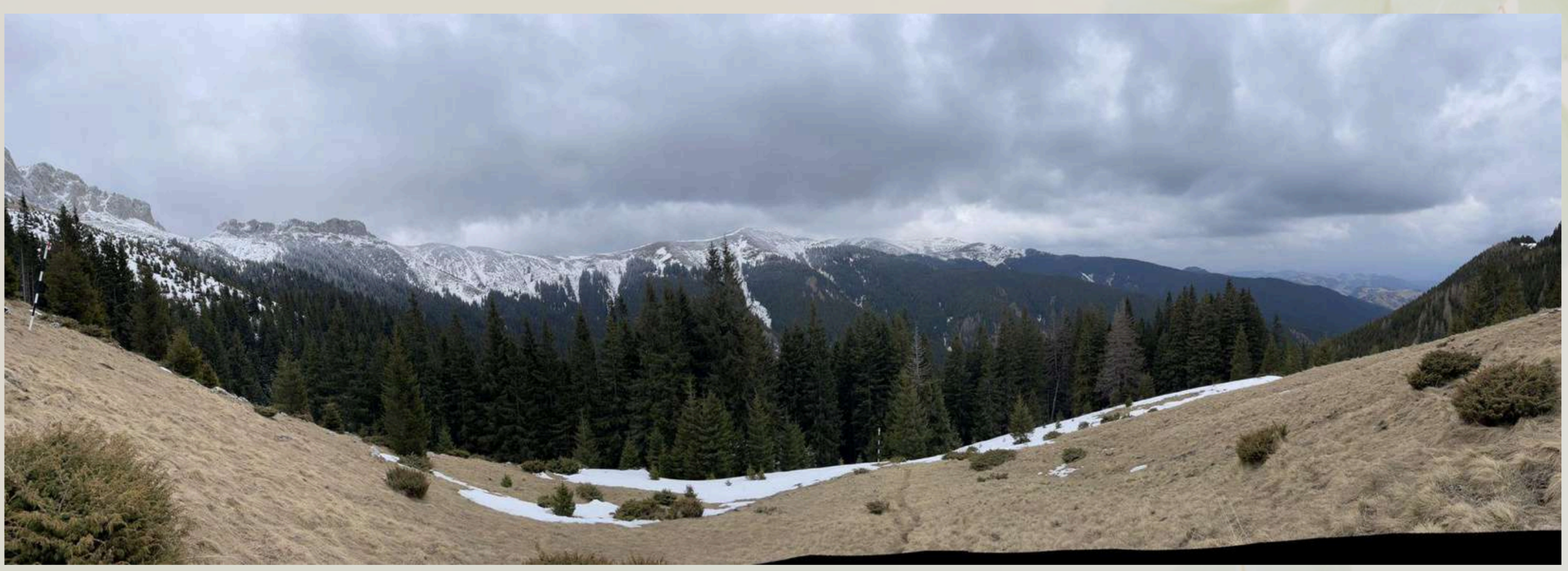


https://www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-10/romania

Romania's environment is a mosaic of mountain ranges, forests, wetlands, and rivers, hosting a wide array of flora and fauna. The Carpathian Mountains, home to one of the largest undisturbed forests in Europe, provide habitat for brown bears, wolves, and lynx. Meanwhile, the Danube Delta, a UNESCO World Heritage site, is a critical stopover for migratory birds.

Romanian national parks are treasured landscapes that offer a glimpse into the country's diverse and stunning natural beauty. From the rugged peaks of the Carpathians to the serene expanses of the Danube Delta, these parks protect a rich mosaic of ecosystems, wildlife, and unique habitats. Each park offers visitors the opportunity to explore and appreciate the natural world, whether through hiking, bird watching, or simply enjoying the tranquillity of untouched nature. These protected areas are not only crucial for biodiversity but also play a significant role in promoting sustainable tourism and environmental education, contributing to the overall ecological and cultural heritage of Romania. These protected areas, each with its unique landscapes and wildlife, include:

- Retezat National Park: Known for its impressive biodiversity, including over 80 glacial lakes and home to wolves, chamois, and lynxes;
- Piatra Craiului National Park: Famous for its long limestone ridge, it's a haven for hikers and home to the elusive Carpathian large carnivores;
- Danube Delta National Park: A UNESCO World Heritage site, this park is a birdwatcher's paradise, hosting hundreds of bird species in its extensive wetlands;
- Rodna Mountains National Park: Features diverse landscapes, from mountain peaks to deep caves, and is ideal for trekking and exploring rare floral species;
- Apuseni National Park: Offers a unique karst landscape with caves, underground rivers, and rare flora and fauna, perfect for spelunking and nature walks.



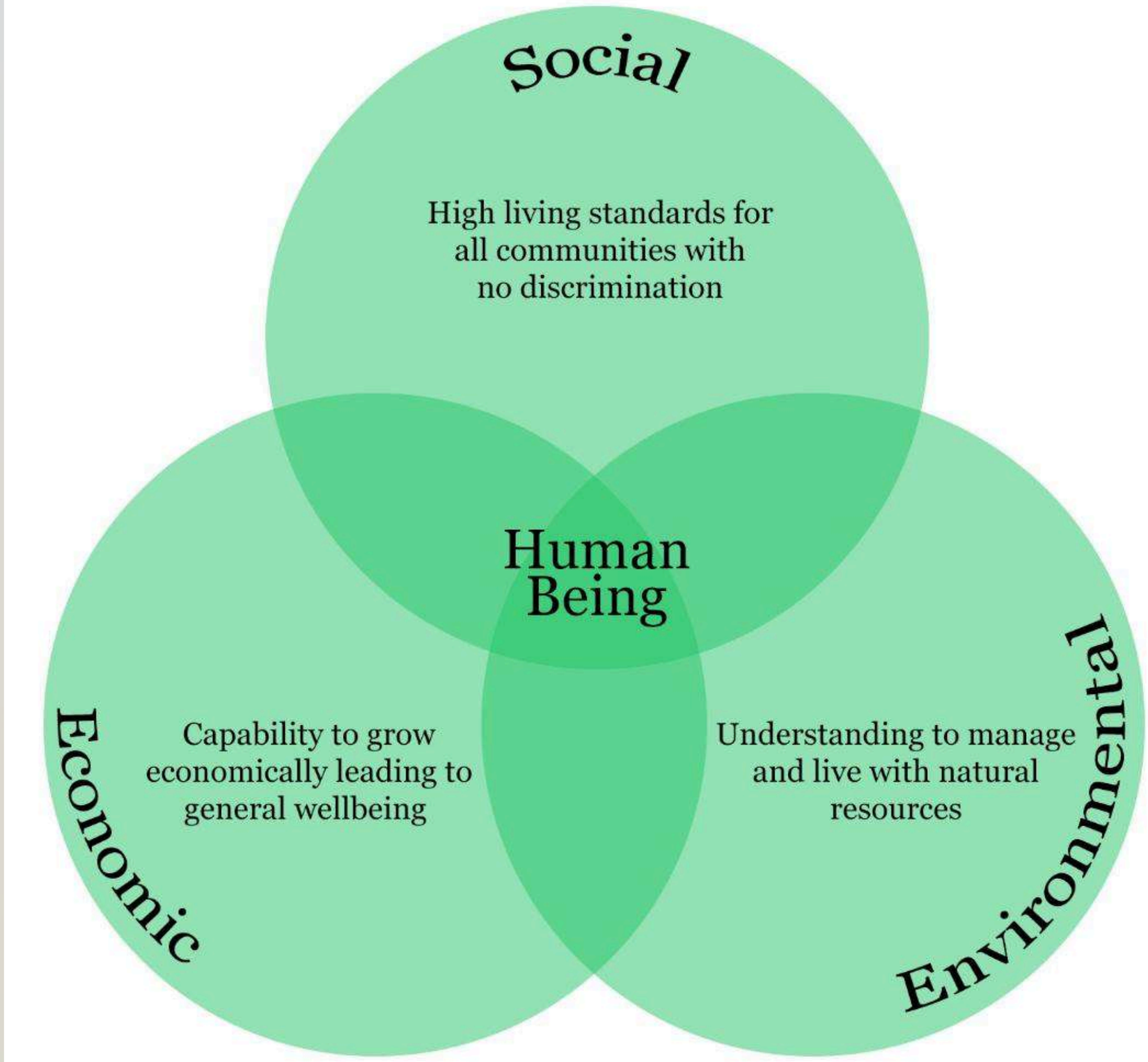
Piatra Craiului Mountains

These parks protect Romania's natural heritage, offering opportunities for exploration and appreciation of the great outdoors, while contributing to sustainable tourism and environmental education.

Despite these natural treasures, Romania grapples with challenges such as deforestation, water pollution, and waste management. Illegal logging has significantly impacted Romania's forests, while industrial and agricultural runoff has affected the quality of water in rivers and the Black Sea.

The country's environmental legislation has evolved significantly since its accession to the European Union in 2007, reflecting an ongoing commitment to align with EU directives and standards. This journey has been marked by the adoption of laws aimed at protecting natural habitats, conserving biodiversity, and addressing the pressing issues of pollution and climate change. However, the path to environmental sustainability is complex, involving a delicate balance between economic development, social equity, and ecological preservation.

Funded by
the European Union



Public awareness and engagement in environmental issues, though improving, still require significant enhancement to ensure widespread support for sustainability initiatives. The transition towards a green economy presents both challenges and opportunities for Romania. The European Green Deal (https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en) offers a roadmap for sustainable economic growth, with the potential for investment in renewable energy, energy efficiency, and sustainable agriculture. Romania's significant natural resources, including wind, solar, and geothermal potential, provide a foundation for developing a robust renewable energy sector. Moreover, sustainable tourism, particularly in regions like the Carpathians and the Danube Delta, offers avenues for economic development that also contribute to conservation efforts.

Funded by
the European Union

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640

The future of Romania's environment depends on the successful integration of environmental sustainability into all aspects of policy-making and economic development. This entails not only adhering to existing laws but also continuously updating the legal framework to address emerging challenges. Collaborative efforts among government, non-governmental organisations, the private sector, and the public are essential to foster a culture of sustainability and to ensure that Romania's natural heritage is preserved for future generations.

The journey towards environmental sustainability in Romania is an ongoing process, reflective of broader global efforts to balance human needs with ecological preservation. By strengthening its legislative framework and focusing on effective implementation and enforcement, Romania can protect its natural landscapes and biodiversity, contributing to global environmental goals and ensuring a sustainable future for its citizens.

The push towards a more sustainable and environmentally conscious society involves not only legislative measures but also public awareness and education. By fostering a deeper understanding of environmental issues and promoting active participation in conservation efforts, we all can enhance the environmental stewardship and contribute to broader EU objectives of sustainability and biodiversity preservation.

1.5. The power of NGOs, individuals, and visual storytelling

In this tapestry of the environmental landscape, the roles of individuals and non-governmental organisations are very important. Individuals, empowered by awareness and education, can drive significant change through their daily small or big choices and advocacy. Personal actions, such as reducing waste, supporting sustainable products, and participating in reforestation projects, collectively contribute to a larger impact on conservation and sustainability efforts. Furthermore, individuals can wield their influence by participating in public consultations and environmental campaigns, thereby shaping policies and practices at both local and national levels. The digital era has amplified our voices, allowing for broader mobilisation and engagement in environmental causes through social media platforms and online petitions. This grassroots activism is crucial for holding corporations and governments accountable, pushing for the implementation of environmental laws, and promoting transparency in environmental governance.

NGOs play an important role in the environmental sector bridging the gap between the government's regulatory frameworks and the community's on-the-ground realities, often stepping in to enforce environmental laws where official mechanisms fall short. NGOs are raising public awareness and providing education on environmental issues. They also spearhead conservation projects, from habitat restoration to protecting endangered species, and advocate for policy changes at both national and EU levels. Through partnerships with local communities, NGOs can implement sustainable development projects that benefit both people and the planet. Their expertise and dedication are essential in mobilising resources, influencing policy, and driving social change towards a more sustainable and environmentally friendly behaviour.

The role of individuals in sustainability shows a powerful truth: small daily actions, when multiplied across millions, can lead to profound environmental change over time. Each choice made at the individual level, from reducing single-use plastic consumption to prioritising public transport and conserving water and energy at home, contributes to a larger collective impact. These actions, seemingly inconsequential in isolation, cumulatively reduce waste, lower carbon footprints, and conserve precious natural resources. Individual decisions to support eco-friendly businesses and products send strong market signals, encouraging companies to adopt sustainable practices. As individuals become more conscious of their environmental impact, they can influence their peers and communities through example and engagement.

This grassroots movement towards sustainability, driven by individual actions and choices, forms the backbone of global efforts to combat climate change and protect our planet for future generations. It highlights the profound power of collective responsibility and the significant effect that seemingly small, daily decisions can have on our shared environmental destiny.

Photographs wield a remarkable power in the realm of sustainability, serving as a potent tool to convey the urgency of environmental issues and inspire action. A single photograph can crystallise abstract concepts like climate change, deforestation, or pollution into tangible, immediate realities, bridging the gap between knowledge and emotion. Visual storytelling has the unique ability to connect viewers with the beauty of nature, the stark reality of environmental degradation, and the resilience of communities fighting for a sustainable future. This visual connection fosters a deeper understanding and empathy, motivating individuals, communities, and policymakers to take action. In the digital age, the rapid dissemination of images across social media and news platforms amplifies their impact, making them an indispensable part of campaigns and movements dedicated to promoting sustainability. By capturing and sharing the world's environmental challenges and solutions through the lens, images not only inform and educate but also galvanise collective efforts to preserve our planet for future generations.

1.6. Moving Forward: Our Project - Sustainable Living through the Lens

Participating Organisations:

- Empower Plus (Romania);
- Yenilikçi Eğitim Bilim ve Sanat Derneği (Türkiye);
- Association Internationale de Mobilisation pour l'Egalité - AIME (France).

Our project seeks to enhance environmental awareness and promote sustainable living among young people through photography. With an urgent need to address climate change and biodiversity loss, the initiative aims to empower youths to actively participate in environmental conservation. The project contains sustainability and photography workshops, targeting 45 youths and 24 youth workers from Romania, France, and Turkey. This innovative approach utilises visual storytelling to foster engagement and inspire action towards sustainability. Additionally, the project bolsters the capacity of participating organisations, facilitates transnational cooperation, and disseminates best practices. Outcomes include national and local workshops, a booklet on sustainable

practices, and local and online exhibitions showcasing participants' photography.

Aligning with Erasmus+ priorities on active citizenship and environmental challenges, the project aspires to cultivate a generation of environmental leaders to positively impact community and general perspectives.

Our main objectives:

- to develop skills of our NGOs youth workers and other young people in sustainability, green business, and photography;
- to promote inclusion of marginalised young people;
- to promote in local communities active citizenship, entrepreneurship, creative practices;
- enhance networking and capacity building for the consortium to engage in other transnational projects.

Our main activities:

1. Project Management and Kick off meeting in France
2. Training Course on Sustainability, Sustainable Business, and Photography in Romania
3. Booklet of Best Practices and Sustainable Business Ideas development
4. 3 local workshops - one in each country
5. A VR online exhibition and 3 local exhibitions and development of a website
6. Dissemination activities
7. Closing meeting in Turkyie

Our main results:

- increased awareness and understanding of environmental issues through workshops, local and online exhibitions, booklet of best practices, sustainable business ideas, and project website;
- increased skills for youth workers in working with young people;
- enhanced artistic and digital skills;
- promotion of sustainable green business, and inclusion of marginalised young people;
- creating a network of partners who can continue to collaborate beyond the scope of this project.

1.7. 'ECO YOU(TH) LENS' Training Course, Brasov, Romania, 28 January - 3 February 2024

Young participants from:

- **Empower Plus (Romania);**
- **Yenilikçi Eğitim Bilim ve Sanat Derneği (Türkiye);**
- **Association Internationale de Mobilisation pour l'Egalité - AIME (France).**

The content of activity:

The "Eco You(th) Lens" Training Course was a key activity of our project, aimed at increasing environmental awareness and promoting sustainable living through photography.

The course emphasised photography as a tool for environmental activism and campaign making and provided opportunities for participants to exchange ideas and experiences, learn from each other, and develop new skills, including Pinhole and digital photography, and green business ideas.

At the end of the training course, participants were able to use these skills to promote positive change in their communities.

The main practical activities:

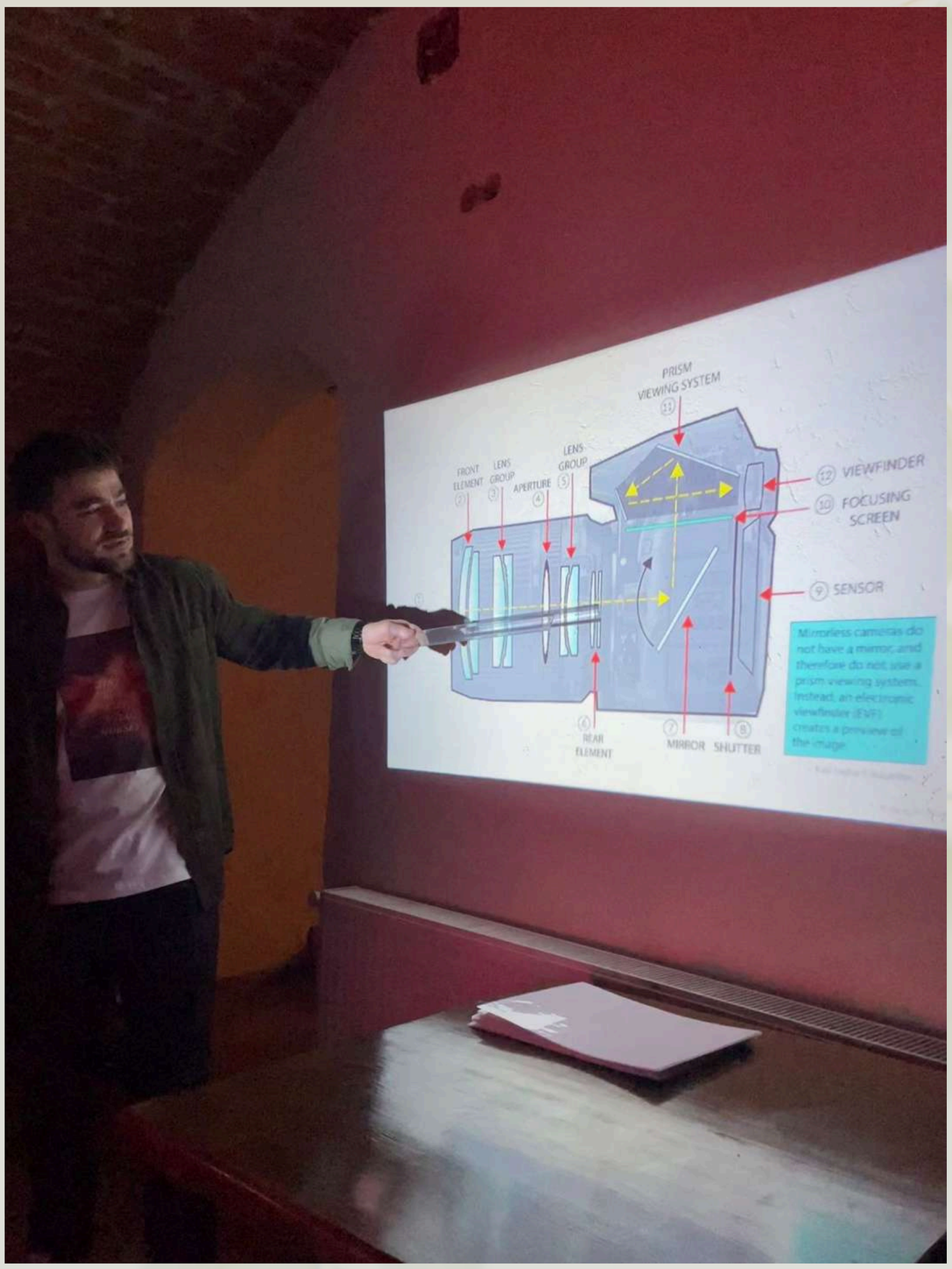
- Digital Photography workshops, where participants learned how to use different photography techniques to document sustainable practices including discussions on sustainability and how to integrate these concepts into visual storytelling;
- Pinhole Photography workshops, where participants learned the general principles of Pinhole photography (the first photography technique used in history) and built their own Pinhole camera;
- Solargraphy workshop (using long exposure technique), where we used materials collected through cleaning activities on the public domain (metal cans) and each participant built their own photo 'cameras';
- Ecology, Sustainability, and Environmental Campaign making workshops, where the participants presented the environmental contexts of their own countries and developed sustainability principles and ideas;
- Practical Photography Sessions in nature in Brasov and its surroundings, where the participants were able to apply the principles learned and took photos that will be

used in the exhibitions made in the project, both locally and online;

- Green Business ideas workshop - local green businesses entrepreneurs (a candles making business using only ecological materials) visited us to gain hands-on experience and inspiration for sustainable practices;

All these theoretical and practical activities, as well as the precious exchange of ideas between participants, in a multicultural environment provided the youth workers valuable insights and knowledge which they can later on apply in the following local workshops within our project, in the NGOs following activities, as well as in their own work, positively impacting their own lifestyle and local community.

Photo from our activities:



Funded by
the European Union

CHAPTER 2: Sustainability and environmental practices - diagnosis and examples

2.1. Introduction

As this report has shown, it is crucial to involve young people in environmental daily activities that can become a lever and awareness experience that will contribute to long-term and transferable sustainable practices. Despite the acknowledgement of young people in sustainable development principles outlined specially since the Brundtland report (1987), these ideals have not been effectively prioritized to generate widespread and sustainable awareness regarding environmental conservation.

The involvement of younger generations in climate advocacy is gaining height, both in media coverage due to increased attention to the issue in recent years and in the political arena, visible by responses to the activities of various climate movement collectives. However, it remains a fragmented understanding of the less visible aspects of collective action, such as its objectives, implementation methods, and challenges. This is because the focus often turns around the powerful actions carried by activists, like civil disobedience and protests, which capture immediate attention during mobilizations. Such actions, though temporary and geographically limited, overshadow the deeper generational shifts in how young citizens engage with political and democratic processes[1].

However, there has been in the past years a new and positive wave towards awareness, inclusive and sustainable practices with diverse stakeholders increasingly engaged in diagnosis, planning , implementing and monitoring such efforts. It has been a significant opportunity to promote youth involvement as a central strategy to define and develop both present and future conservation efforts [2]. Consequently, it is imperative for organizations (public and private) to gain a deeper understanding of how youth engagement should be integrated into existing governance structures and local practices, and to provide encouragement and a fertile ground for youngsters to develop and encourage their own sustainable and daily practices.

[1] Institut national de la jeunesse et de l'éducation populaire (INJEP) - sept 2023
https://injep.fr/wp-content/uploads/2023/09/Synthese-Baro_jeunesse_Moral-engagement.pdf

[2] Review: Youth Engagement and Intergenerational Partnership across IUCN - 28/02/2021
https://iucncongress2020.org/sites/www.iucncongress2020.org/files/page/files/intergens_-_report_-_review_youth_engagement_and_intergenerational_partnership_across_iucn_-_06042021.pdf

Many young people and their entourage have already participated in eco-friendly practices on a daily basis without acknowledging they were already promoting sustainable local development.

Therefore, investing in the engagement of young people allows numerous benefits for global conservation. These benefits envelop, among others, the development of acknowledgement and critical thinking and thus the expansion of the pool of motivated groups, the evolution of changed attitudes towards conservation among emerging generations, and most significantly, the assurance of inclusion for often marginalized groups in endeavors towards sustainable development. Additionally, there is a belief that younger generations bring forth innovations and fresh perspectives, which, when complemented with existing knowledge and tools, can lead to the attainment of greater transformative goals [3].

This report section aims hence to propose a series of recommendations and good experiences around user-friendly, transparent and transferable environnemental practices for young people to easily implement in their daily lives.

This section will firstly focus on an introduction around the importance from a social and democratic perspective of these good practices, secondly it will deal with educating about active eco-citizenship and preservation of biodiversity and the environment at a local level. Then it will pursue a non-exhaustive list of user-friendly and successful recommendations of local projects, examples and initiatives. It will continue with the description of a list of skills training and green professions that can be applied and followed by young people. The analysis will continue around practical cases on green mobility. This section will conclude with various recommendations to take into consideration regarding the evolution of sustainable development practices for young people.

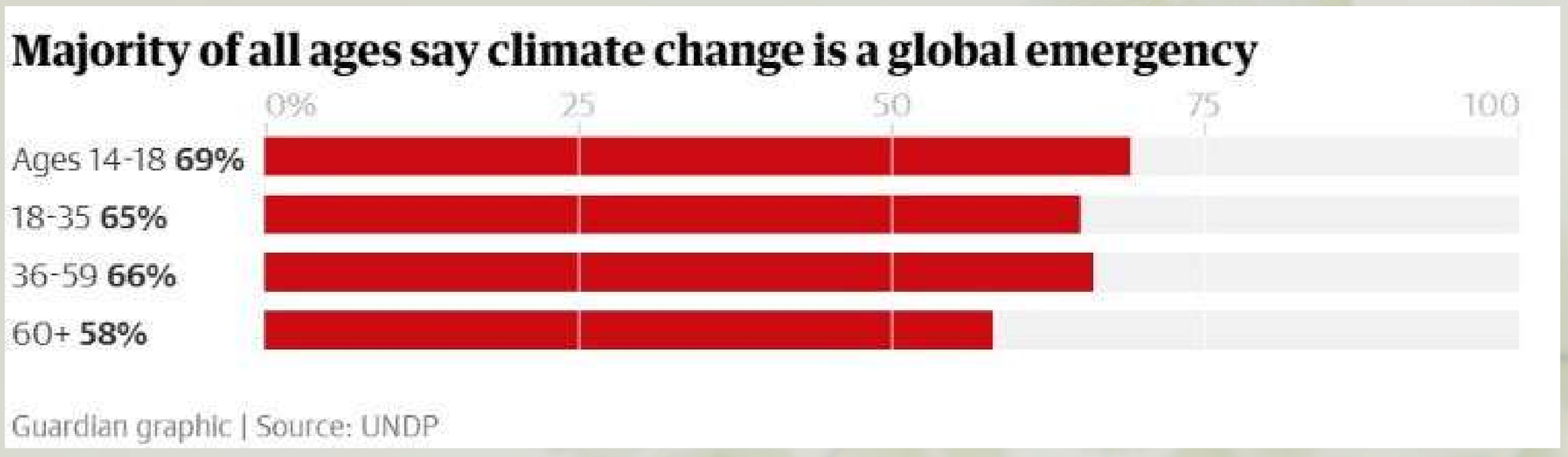
---

[3] Review: Youth Engagement and Intergenerational Partnership across IUCN - 28/02/2021 - https://iucncongress2020.org/sites/www.iucncongress2020.org/files/page/files/intergens_-_report_-_review_youth_engagement_and_intergenerational_partnership_across_iucn_-_06042021.pdf

2.2. DIAGNOSIS

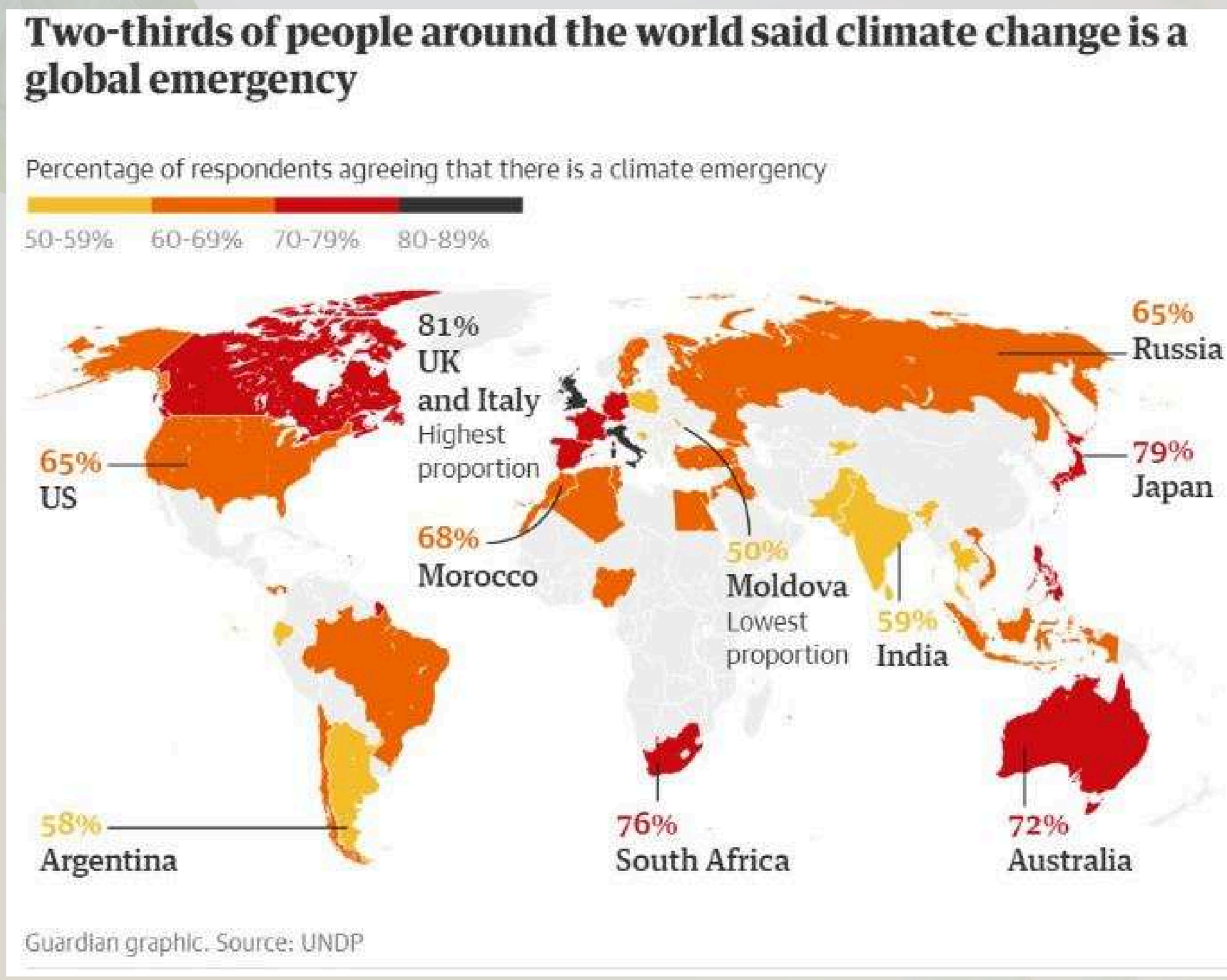
Young people worldwide express significant concern about the consequences of climate change, as they are some of the most vulnerable to the lifelong environmental effects caused by climate change. As it has been shared by Achim Steiner, the Administrator of United Nations Development Programme (UNDP) in its 2022 report on *Elevating Meaningful Youth Engagement for Climate Action, "Compared to their grandparents, it is projected that a child born in 2021 will live through seven times as many heatwaves, nearly three times as many droughts and twice as many wildfires. Yet these impacts are not felt equally, with young people living in developing countries most impacted. As the grip of climate change tightens, young people are leading efforts to change the future by demanding climate action now from their governments. They are not taking 'no' for an answer, as they realise that there is no time to lose" . [4]*

These consensus statements around youth and climate change have been acknowledged in the 2021 Climate vote, the largest survey of public opinion on climate change ever conducted, with 1,2 millions respondents, in 50 countries, covering around 56% of the world's population, among which two in three people aged between 14 and 18 years old believe that climate change is now a global emergency.



[4] Achim Steiner, Administrator, United Nations Development Programme (UNDP) https://www.undp.org/sites/g/files/zskgke326/files/2022-05/UNDP-Elevating-Meaningful-Youth-Engagement-for-Climate-Action-2.pdf

Funded by
the European Union



Youth consequential concern for climate change emergency is also to be put into perspective with disastrous health issues, rather on a physical or on a mental level. According to a study led by Clark, et al. (2020), children and youth will be the first to suffer from sea level rise, heatwaves, diseases, malnutrition, and more, affecting their lives directly.

Furthermore, the growing concerns about climate change are adversely affecting the emotional and psychological wellbeing of young individuals. A study conducted in 2021, encompassing 10,000 youth from various regions worldwide, revealed that more than 50 percent of respondents experienced emotions such as sadness, anxiety, anger, powerlessness, helplessness, and guilt regarding climate change. Additionally, 45 percent reported that these feelings had a detrimental impact on their daily life and functionality (Marks et al., 2021).

All together, this leads to various youth movements and initiatives to take back control over unsustainable production and consumption patterns and lifestyles, and rather introduce some new patterns achieving sustainable development through sustainable consumption and production, overpassing the risk of being tokenized.

In recent years, young climate activists have persistently pushed for bold action on climate change, urging leaders at every level, from local to global, and across all sectors and age groups, to take decisive steps. They have held these leaders accountable for both their actions and their inaction regarding climate change, emphasizing the significant costs that current and future generations will bear as a result.

Through their will of preserving a sustainable future, youth take direct action through diverse global youth movements, actively advocating for access to decision-making forums and calling for mechanisms facilitating their involvement in shaping, implementing, and evaluating climate policies and initiatives across all levels of governance.

Who are they ?

According to the United Nations, youth are defined as those persons between the ages of 15 and 24 years, as a heterogeneous group, diverse in age, gender, religion, socio-economic status and levels of physical, emotional and cognitive maturity.
This wide diverse range of identities among youth testify how youth do not experience the world in the same way, in terms of opportunities as much as inequalities. As for it, it leads them to experience action through different prisms.

Democratic support for climate action: what do people want? The Associations' case

Nature and environmental defense associations in France were pioneers, emerging in the late 1960s, aiming to reshape the legal landscape to prioritize nature protection and address the impacts of human activities on the environment. As the concept of "sustainable development" gained importance in the 1990s, international and local solidarity associations began to engage in environmental preservation efforts, even if it wasn't their primary focus.

The first one focused on integrating sustainable development principles into international treaties and national cooperation policies, while the latter worked to ensure that laws contributed to reducing environmental inequalities.

Furthermore, numerous consumer defense associations contribute actively to develop the law in favor of the ecological transition.

These associations get their credibility from advocating for common goods such as air, water, and soil, rather than defending private commercial interests, and they do so without seeking financial gain.

In order to provide a concrete index regarding associations options, this section will propose an non exhaustive list of resources and alternatives of organizations that tackle environmental subjects within the European Union :

1. SHARED GREEN DEAL : brings together 22 leading organizations from across the EU, including universities, research institutions, network organizations and businesses. If you want to be put in touch with specific partners. :
    a. https://sharedgreendeal.eu/partners
2. GREEN 10 : a coalition of ten of the largest environmental organizations and networks active on the European level. They work to ensure that the European Union protects the climate, the local environment, biodiversity and human health within and beyond its borders.
    a. https://green10.org/
3. EUROPEAN SOLIDARITY CORPS : list of accredited organizations - nature and environment protection
    a. https://youth.europa.eu/volunteering/organisations_en?country=&topic=Climate+action%2C+environment+and+nature+protection&scope%5Bql%5D=&town=&name=&combine=&inclusion_topic=&op=Apply+Filter
4. EUROPEAN ENVIRONMENT AGENCY : Efforts to transform Europe’s economy into a circular one will require further bold action and strong implementation of existing measures.
    a. https://www.eea.europa.eu/en

5. EUROPEAN ENVIRONMENTAL BUREAU : The EEB is the largest network of environmental citizens' organizations in Europe. It currently consists of over 180 member organizations in 40 countries. We stand for sustainable development, environmental justice and participatory democracy.

a. https://eeb.org/

6. YOUTH AND ENVIRONMENT EUROPE (YEE) : YEE advocates for meaningful, systemic, and inclusive youth participation in environmental activities and initiatives. Young people have a stake in the future of the environment, and YEE prioritizes considering youth as a separate stakeholder in international climate negotiations.

a. https://yeenet.eu/about-yee/

2.3. Political Actions

Political-climate commitment encloses decision-making, behavioral orientation, and conduct, all focused towards advancing climate and social justice objectives at different levels of implementation. This commitment manifests in diverse ways, from individual eco-conscious practices in daily life choices such as diet, consumption habits, and personal philosophy, to broader collective actions.

Through political engagement, individuals not only demonstrate their personal actions and values but also contribute to a wider societal dimension. It can be stated that political-climate commitment reflects an active role in both personal and societal change dynamics, enclosing aspects of personal growth and social transformation. It signifies a form of citizenship that extends beyond individual concerns for the future and instead, intends to a collective well-being and the future of humanity and the planet. The term "political-climatic" properly describes the type of commitment driving young people engagement with climate issues, as it reflects their dual focus on addressing climate change and influencing societal norms and structures.

The political emerges from the social when communities recognize their agency in shaping their existence and conceive their organization and reality as products of collective will.Political-climatic commitment has the power to forge and reshape social bonds, prompting citizens to reevaluate and evolve the political frameworks that underpin the future of humanity and the planet.

Moreover, enhancing youth participation in climate action necessitates profound systemic changes across all aspects of governance: politics, policies, and institutions. Young people engage in Climate Change Governance (CCG) to create change or transformation. Understanding the various dimensions of governance, youth participation can target policies (tools), politics (actors and political processes), and polity (institutional framework and norms), each offering different degrees of influence, with polity representing the most fundamental change. These terms should be interpreted broadly, extending beyond governmental and national boundaries to encompass all levels of governance, which can be specified by the attribute of "level of governance." Thus, policies could enclose corporate policies, NGO policies, and subnational policies; politics could involve power dynamics between non-state and state actors; and polity could entail the broader institutionalized framework of structures and norms.[5]

2.4. Educate about eco-citizenship active and preservation of biodiversity and the environment: best practises and experiences from non formal education

Introduction

For young people engaged in the climate cause, their aspirations and identity are clear: they identify as "youth committed to climate and social justice" (Youth for Climate France - YFC). Their political engagement materializes through research and activism for "social justice," which reflects their commitment to improve the society they live in. Through their daily actions and activist endeavors, whether through demonstrations, voting, or raising awareness, both individually and collectively, individuals express their citizenship. By addressing the government and expressing apprehensions about the future of society, they assume roles as agents of change, influencing political discourse and transformation. This engagement is characterized as active, critical, civic, and political. Political-climate commitment involves individuals in concern for the common good and the future of mankind.[6]

[5] https://journals.openedition.org/trema/7139#tocto2n1

[6] Elorri Corbin, Yoan Mieyaa, Marie Huet-Gueye et Ania Beaumatin, « L'engagement politico-climatique des jeunes : une sphère de socialisation et de personnalisation en période de crise », Tréma [En ligne], 56 | 2021, mis en ligne le 01 mars 2022, consulté le 16 avril 2024. URL : http://journals.openedition.org/trema/7139 ; DOI : https://doi.org/10.4000/trema.7139

Non-formal education plays a crucial role in lifelong learning by equipping both young people and adults with the skills needed to navigate a constantly evolving world. It supplements formal education through various learning activities conducted outside the traditional classroom setting. Within environmental education and sustainability, non-formal education can develop a vital framework.

Particularly at the secondary education level, non-formal settings can foster Environmental Citizenship by providing the knowledge, values, and skills necessary for individuals to engage actively in environmental issues. An Environmental Citizen is empowered to drive positive change, address existing environmental challenges, and promote sustainability.

Pedagogical approaches such as place-based education, civic ecology education, and socio-scientific inquiry-based learning play essential roles in cultivating the competencies required for meaningful civic engagement. However, the lack of a comprehensive pedagogical framework for Environmental Citizenship Education in non-formal settings remains a significant obstacle [7].

The following presents several characteristics of non-formal education and their relevance to developing Environmental Citizenship :

- Conversation– Conversation in peer communities under guidance (youth worker or guide) is a generative element of non-formal education that facilitates learning
- Network : These elements establish the framework for non-formal education institutions, showcasing their communication dynamics which differ from the centralized, hierarchical structure of formal education. They promote a multi-directional and equitable mode of communication

---

[7] Conceptualizing Environmental Citizenship for 21st Century Education, Environmental Discourses in Science Education
https://www.researchgate.net/publication/339520328_Educating_for_Environmental_Citizenship_in_Non-formal_Frameworks_for_Secondary_Level_Youth

- Tight vs. loose learning spaces : within the settings for non-formal learning, it is necessary to differentiate between tight and loose learning environments. Tight spaces operate on a basis of functionality, such as following a pre-set, schedule, and emphasize uniformity. Schools exemplify tight spaces. In contrast, non-formal learning settings represent loose learning spaces—embracing diversity, flexibility, adaptable learning opportunities, and prioritizing negotiation over strict curricular frameworks or regulations.
- Educational institutions : While schools represent one of the basis of formal education setting, non-formal education can occur in a variety of places such as association, communes, community centers, and youth-group branches. Participants in non-formal educational activities perceive their learning environment as a welcoming and safe "second home." Consequently, they don't encounter the feelings of alienation, identity loss, or lack of practical applicability often associated with the structured environment of schools or workplaces, where individuals, both young and adult, spend mandatory time.
- Mutual development : In non-formal education, everyone grows together: as the group progresses, so do its members, and vice versa. This idea shows how individuals and society are connected, which can help people understand the importance of being environmentally responsible.
- Experiential learning : When learning involves interacting with others, it helps become more responsible by making people feel more connected to the environment, changing how they think, and boost their awareness of their surroundings.These aspects encourage behaviours that support environmental sustainability.

This brief overview of the different features of informal and non-formal education and their connection to environmental learning for sustainability emphasizes how these approaches can help develop both cognitive and emotional aspects of Environmental Citizenship. In terms of emotions, these settings spark curiosity and encourage exploration, provoke feelings that may lead to attitude changes, foster a sense of personal and community identity, and can impact individuals' decision-making regarding ethical issues in their daily lives.

Funded by
the European Union

Image 1 : example of workshop around Sustainable development through non-formal education activities at AIME ONG (Paris- France, April 2024)

Funded by
the European Union

Image 2 : example of workshop around Sustainable development through non-formal education activities - ODD at AIME ONG (Paris-France, April 2024)

Non-formal activities offer innovative alternatives to traditional classroom teaching methods. They encourage personal interaction in problem-solving, cultivate the readiness and skills for critical and active involvement in both individual and collective scope within democratic contexts, and emphasize intergenerational equality and justice. Non-formal settings could significantly contribute to Education for Environmental Citizenship by providing opportunities and conditions for young people to acquire not only the knowledge but also the essential skills, values, attitudes, and pro-environmental behaviors necessary for effective citizenship. By empowering and motivating young individuals to take action and engage with society as agents of change, these settings can address contemporary environmental challenges, prevent the emergence of new environmental issues, promote sustainability, and restore our human connections with nature. While non-formal environmental education activities have primarily focused on individual changes, particularly in attitudes and behaviors related to the environment.

Teachers, youth-workers and trainers dedicated to environmental learning have traditionally focused on promoting environmental literacy and creating positive nature-based experiences to cultivate ecologically responsible citizens through the development of knowledge and environmental behaviors. However, there has been a change in recent years among environmental educators towards recognizing the importance of going beyond only individual changes in attitudes and behaviors. Instead, there is a growing emphasis on understanding environmental learning processes that aim at socio-ecological change collectively.

This change strikes the recognition that environmental education should go beyond simply changing individual behavior or increasing youngsters' knowledge about environmental issues. Environmental education is intimately linked with environmental policy, and its role extends to empowering young people to become active Environmental Citizens within their communities. This entails encouraging civic participation and active engagement while also helping students comprehend the structural and systemic roots of both social and environmental problems.

The pedagogical approaches, teaching tools, and learning methods employed in non-formal education have the potential to complement formal secondary education in advancing Education for Environmental Citizenship [8] :

- **Place-based education :**

This method immerses students in local heritage, cultures, landscapes, opportunities and experiences, using these as a foundation for the study of language arts, mathematics, social studies, science and other subjects across the curriculum. The Place-based framework and its adaptations, such as expeditionary learning, pedagogy of place, problem-based learning, and service-learning, aim to blur the lines between schools and their surroundings.

They achieve this by integrating local phenomena—spanning from cultural and political aspects to environmental issues and the economy—into students' educational experiences. This approach doesn't ruin the significance of conceptual understanding and skills acquired through education; rather, it incorporates them into an experiential and multidisciplinary learning environment within non-formal settings. Furthermore, these settings have the potential to make positive contributions to the community. Environmental Education practices that seek to engage students with their local environment and community, offering opportunities for social involvement, hold the potential to foster Environmental Citizenship.

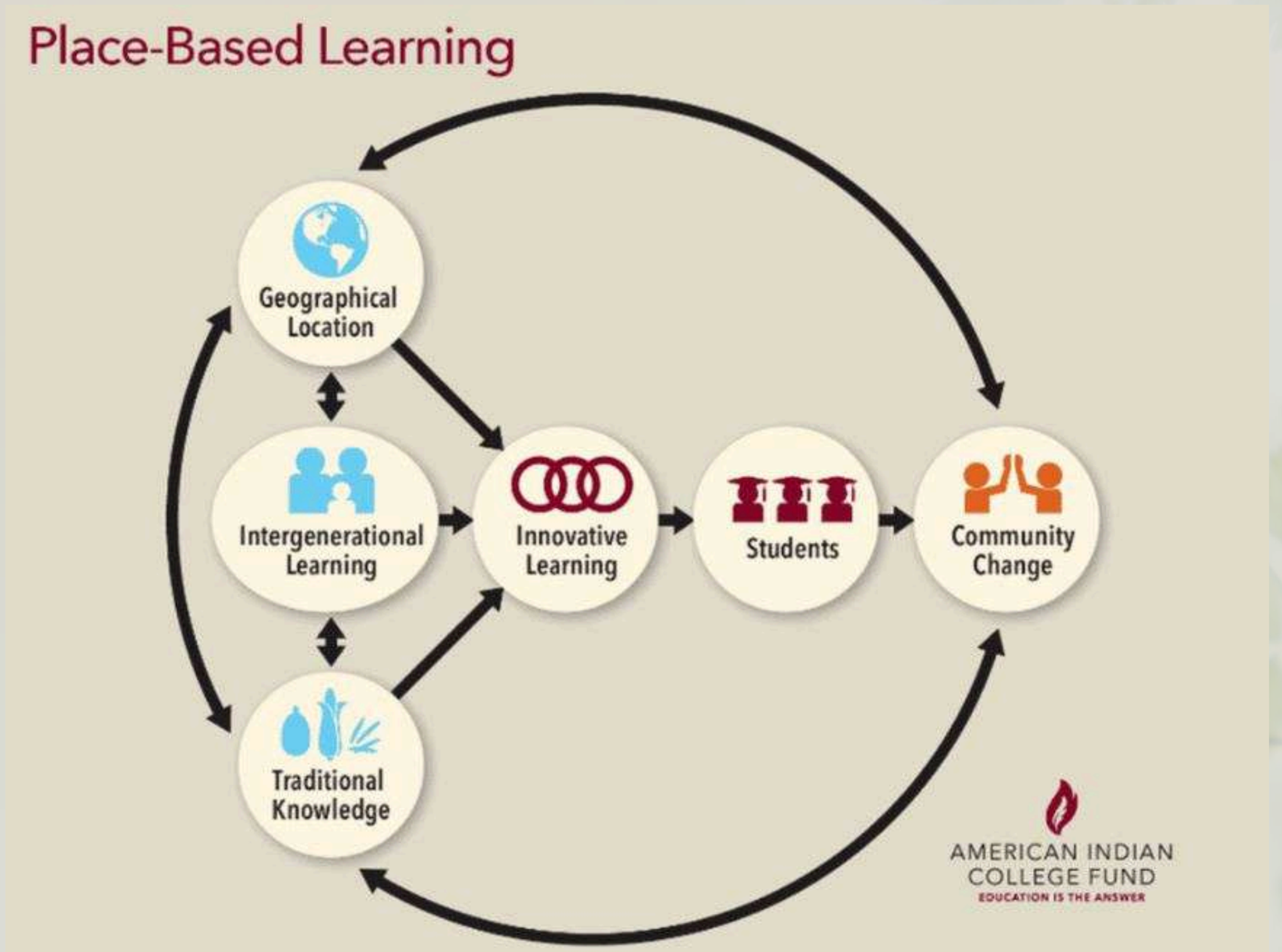
The effectiveness of place-based learning lies in its capacity to empower students by providing authentic chances to contribute to positive changes within their local communities. This involvement leaves students with a stronger "sense of their own agency and collective capacity."

---

[8] Conceptualizing Environmental Citizenship for 21st Century Education, Environmental Discourses in Science Education
https://www.researchgate.net/publication/339520328_Educating_for_Environmental_Citizenship_in_Non-formal_Frameworks_for_Secondary_Level_Youth

Funded by
the European Union

Image 1 : example of place-based education



Graphic 1:"Place-based knowledge also promotes the opportunity for students and faculty to establish relationships between learning outcomes with enacting change in their communities."

- **Civic Ecology Education :**

Civic ecology pedagogy offers another option for promoting Environmental Citizenship in non-formal settings. Civic ecology involves management practices that integrate social and environmental values within a framework of social-ecological systems. Participants engage as managers of their environment through activities like community gardening, community forestry, and watershed restoration. These practices encourage experiential and participatory learning within real-life resource management contexts, promoting both ecosystem and social health. This approach is referred to as the 'ecology of environmental education.

Civic ecology also encloses urban environmental education programs that involve youth in community-based management to restore urban habitats. These programs combine 'nature contact' with democratic deliberation. Consequently, civic ecology education is inherently politically oriented, connecting participants with emerging movements such as civic environmentalism and citizen renewal.

Moreover, Civic ecology education integrates traditional Environmental Education with civic engagement, offering a dynamic framework for promoting Environmental Citizenship. This approach transcends individual knowledge, attitudes, and behaviors by empowering individuals to actively participate in democratic processes essential for achieving sustainability. Furthermore, in civic ecology education, citizenship is viewed as a collective endeavor.

In this sense, it extends beyond simply promoting individual virtues or behavioral changes towards environmental goals. It involves collective action through practices where local communities collaborate to achieve common objectives.

- **Ecojustice Pedagogy :**

Ecojustice pedagogy presents a promising approach to promoting Environmental Citizenship in non-formal settings by advocating for experiential learning outside the traditional classroom. It emphasizes the importance of spending time in diverse environments, engaging with various cultural perspectives, acquiring a range of natural history knowledge, and encouraging community connections and actions. This pedagogical approach combines Western scientific knowledge with traditional ecological knowledge, employing a multidisciplinary approach that transcends conventional boundaries. By doing so, it makes science and environmental learning more accessible, visible, and relevant to youngsters, moving beyond abstract classroom instruction.

Young people can then apply this "personal knowledge" to their daily lives, regardless of geographic, socio-cultural, or socio-economic diversity. Ecojustice pedagogy also adopts a relationship-oriented, ecological conceptual framework that supports a broader global perspective, integrating an ecological lens with social justice principles. It extends the concept of justice to encompass environmental concerns and addresses issues such as 'environmental racism'.

Furthermore, within the broader theory of ecology, ecopedagogy offers valuable insights into ecological thinking that can be put into meaningful practice.Through ecojustice education, students gain an understanding of ecologically sustainable practices from diverse cultures and prioritize participation in non-commercial aspects of community life. Additional strategies for implementing ecojustice pedagogy include learning principles of ecological design, revitalizing non-commercialized skills, knowledge, and relationships based on self-reliance, and democratizing technology and science.

Environmental Education increasingly explores the learning processes that empower youth to engage in environmental action within the public sphere. This has led to discussions about the transversality of environment, science, and civics education, with a focus on encouraging active democratic citizenship.

Environmental action as an educational approach differs from simply targeting specific behaviors like energy conservation or recycling. Instead, it aims to empower young people to develop strategies for addressing environmental issues they find relevant. This involves collaborative decision-making, where both adults and young people work together to design, implement, and evaluate projects, whether initiated by youth or adults.

Numerous examples exist in educational practice where young people have taken meaningful environmental action, demonstrating the effectiveness of this approach.
Sharing experiences and best practices allows and encourages to provide new ideas that can be easily transferable, and put into practice by young people.

This section present a non-exhaustive list of successful , easy transferable eco-friendly projects [9]:

Educate about active eco-citizenship and the preservation of biodiversity and the environment :

- To create and co-develop shared gardens and to train people on how to disseminate this knowledge
- Raise awareness among new audiences about preservation of biodiversity in the city
- Raise awareness about the importance of bee protection and conservation
- How to face challenges on water resources management

---

[9] Transition Ecologique - Recueil de projets 2023, Agence Erasmus+ France https://agence.erasmusplus.fr/wp-content/uploads/2023/12/RECUEIL_PROJETS_TRANSITION_ECOLOGIQUE_WEB2.pdf

Skills training:

- To learn eco-friendly practices and gestures while on vacations
- To train on organic farming practices
- To train on energy conservation and efficiency
- To broader horizons of future professionals of nature protection and conservation (skills and capacity building)

Erasmus+ : to become Become a program environmentally friendly :

- To encourage green mobility
- To Reduce the carbon footprint generated by Erasmus+ mobility (to Calculate the carbon impact of mobility)
- To implement ecological compensation measures
- To develop an eco-friendly strategy within organizations (daily practises)

In conclusion, this chapter has aimed to provide not only an initial diagnosis on the importance of sustainable development within the young population and its impact on their daily lives, but also to provide tools on how sustainable good practices can be shared within the scope of non-formal education.

These activities must be complemented with an efficient dissemination and outreach in order to provide better results. Moreover, qualitative assessment, and regular feedback from all stakeholders are crucial to adapt and improve the practices within each geographical and cultural context.

CHAPTER 3: GREEN BUSINESS

3.1. Introduction to Green Business

Defining Green Business

Green business refers to enterprises that operate in an environmentally responsible manner, minimizing their negative impact on the environment while maximizing positive contributions to society. “Green business encompasses a range of strategies and practices aimed at reducing the environmental impact of commercial activities. These practices may include the use of renewable energy sources, adoption of eco-friendly technologies, implementation of sustainable supply chain management, and commitment to social responsibility” (Shrivastava, P. (1995). The Role of Corporations in Achieving Ecological Sustainability. Academy of Management Review, 20(4), 936-960. doi:10.5465 /amr. 1995.9508080337).

The primary aim of green businesses is to harmonize environmental sustainability with economic success by incorporating environmental factors into their operational strategies. These businesses prioritize sustainability across all aspects of their operations, from sourcing materials to production processes and waste management.

Importance of Sustainable Practices

Sustainable practices are crucial for businesses to address pressing environmental issues such as climate change, resource depletion, and pollution. By adopting sustainable practices, businesses can not only reduce their ecological footprint but also enhance their reputation, attract environmentally conscious customers, and achieve long-term financial viability.

3.2. Foundations of Sustainability

Principles of Sustainability

Sustainability is built on three key principles: environmental responsibility, social equity, and economic viability. Businesses must strive to minimize their environmental impact by conserving resources, reducing emissions, and promoting biodiversity. Additionally, they should prioritize social equity by ensuring fair labor practices, supporting local communities, and fostering diversity and inclusion. Finally, economic viability entails

operating profitably while also considering the long-term implications of business decisions on both society and the environment.

Benefits of Adopting Sustainable Practices

There are numerous benefits to adopting sustainable practices for businesses. These include cost savings through reduced resource consumption and waste generation, enhanced brand reputation and customer loyalty, improved employee morale and productivity, access to new markets and customers who prioritize sustainability, and resilience to regulatory changes and market fluctuations. Embracing sustainability not only mitigates risks but also drives innovation and long-term growth.

3.3. The Green Economy

Overview of Green Economy

The green economy encompasses economic activities that aim to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcities. It involves sectors such as renewable energy, sustainable agriculture, eco-tourism, green building, and clean technology. The transition to a green economy is driven by the need to address global challenges like climate change, resource depletion, and biodiversity loss while creating opportunities for sustainable development and inclusive growth.

The green economy represents a fundamental shift in economic thinking and practice towards sustainability and environmental stewardship. It encompasses a wide range of economic activities, innovations, and policies aimed at fostering harmony between economic prosperity, social equity, and environmental health. At its core, the green economy seeks to decouple economic growth from resource depletion and environmental degradation, recognizing that traditional models of development are not sustainable in the long term.

Key Components of the Green Economy

1. Renewable Energy: Renewable energy sources such as solar, wind, hydroelectric, and geothermal power play a central role in the green economy by providing clean and sustainable alternatives to fossil fuels. Investments in renewable energy infrastructure not only reduce greenhouse gas emissions but also create jobs and stimulate economic growth.

2. Sustainable Agriculture: Sustainable agriculture practices promote soil health, biodiversity conservation, and water efficiency while minimizing the use of synthetic fertilizers and pesticides. Organic farming, agroforestry, and regenerative agriculture are examples of sustainable agricultural approaches that prioritize environmental sustainability, food security, and rural development.

3. Eco-tourism: Eco-tourism focuses on responsible travel to natural areas that conserve the environment and support local communities. It offers travelers immersive experiences in pristine natural landscapes while promoting conservation efforts, cultural heritage preservation, and sustainable livelihoods for indigenous peoples and rural communities.

4. Green Building: Green building practices aim to minimize the environmental impact of construction and building operations through energy efficiency, water conservation, waste reduction, and use of environmentally friendly materials. Green buildings are designed to enhance occupant comfort, health, and productivity while reducing carbon emissions and operating costs.

5. Clean Technology: Clean technology, also known as cleantech, encompasses innovations and technologies that enable the transition to a low-carbon and resource-efficient economy. Examples include energy-efficient appliances, electric vehicles, smart grids, waste-to-energy systems, and carbon capture and storage technologies. Clean technology innovations drive economic growth, create green jobs, and facilitate the transition to a sustainable energy future.

Drivers of Transition

The transition to a green economy is propelled by the urgent need to address pressing global challenges such as climate change, resource depletion, and biodiversity loss. The scientific consensus on the adverse impacts of human activities on the planet's ecosystems and climate has underscored the importance of transitioning to sustainable and resilient economic systems. Moreover, increasing awareness among policymakers, businesses, and civil society about the interconnectedness of environmental, social, and economic issues has catalyzed efforts to mainstream sustainability principles into decision-making processes and institutional frameworks.

Benefits of the Green Economy

The green economy offers numerous benefits for society, the economy, and the environment. These include:

- Environmental Sustainability: By reducing reliance on finite resources and minimizing pollution and waste, the green economy helps preserve ecosystems, biodiversity, and natural habitats for future generations.
- Social Equity: The green economy promotes inclusive growth and social justice by creating opportunities for decent work, poverty alleviation, and community empowerment, particularly in marginalized and vulnerable communities.
- Economic Resilience: Investments in green infrastructure, technologies, and industries enhance economic resilience to climate change impacts, energy price volatility, and resource scarcity, while also driving innovation, productivity, and competitiveness.
- Health and Well-being: Cleaner air, water, and environments contribute to improved

public health outcomes and quality of life, reducing healthcare costs and enhancing overall well-being for individuals and communities.

"The green economy offers a powerful means for job creation, social inclusion and poverty reduction, while addressing environmental challenges. It can provide a vital strategy for countries to leapfrog to cleaner, more resilient economies." (Ban Ki-moon, former Secretary-General of the United Nations, in his foreword to the UNEP report "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication" (2011)). The green economy represents a holistic and transformative approach to sustainable development that balances economic prosperity, social equity, and environmental stewardship. By embracing the principles of the green economy, businesses, governments, and civil society can work together to build a more resilient, equitable, and prosperous future for all.

Opportunities and Challenges

The green economy presents numerous opportunities for businesses to innovate, create value, and contribute to sustainable development. These opportunities include increased demand for renewable energy solutions, growing consumer preference for eco-friendly products and services, and emerging markets for carbon offsetting and sustainable finance. However, transitioning to a green economy also poses challenges, such as the need for significant investments in green infrastructure and technologies, overcoming regulatory barriers, and changing consumer behavior and market dynamics. Businesses must navigate these challenges while seizing opportunities to thrive in the green economy of the future.

Opportunities in the Green Economy:

1. Increased Demand for Renewable Energy Solutions: The global shift towards renewable energy sources presents vast opportunities for businesses involved in the development, manufacturing, installation, and maintenance of solar, wind, hydro, and other renewable energy technologies. As governments worldwide commit to ambitious renewable energy targets and carbon neutrality goals, the demand for clean energy solutions is expected to soar, creating a thriving market for renewable energy companies and investors.

2. Growing Consumer Preference for Eco-Friendly Products and Services: Consumers are increasingly prioritizing sustainability and environmental responsibility in their purchasing decisions, driving demand for eco-friendly products and services across various sectors. Businesses that offer sustainable alternatives to conventional products, such as organic food, green household products, electric vehicles, and sustainable fashion, stand to gain market share and enhance their brand reputation by catering to eco-conscious consumers.

3. Emerging Markets for Carbon Offsetting and Sustainable Finance: The rising awareness of climate change and the need to mitigate greenhouse gas emissions have spurred the development of carbon offsetting schemes and sustainable finance mechanisms. Businesses can capitalize on these emerging markets by investing in renewable energy projects, implementing carbon reduction initiatives, and offering sustainable investment products and services that align with environmental, social, and governance criteria. Moreover, companies that demonstrate commitment to sustainability and responsible business practices are more likely to attract investors and secure funding in the growing green finance landscape.

4. Innovation and Technological Advancements: The transition to a green economy requires continuous innovation and technological advancements across various sectors to improve resource efficiency, reduce emissions, and enhance environmental performance. Businesses that invest in research and development (R&D) to develop innovative green technologies, such as energy storage systems, smart grid solutions, circular economy models, and sustainable materials, can gain a competitive edge and drive market transformation towards sustainability.

Challenges in Transitioning to a Green Economy:

1. Significant Investments in Green Infrastructure and Technologies: Transitioning to a green economy requires substantial investments in green infrastructure, renewable energy projects, sustainable transportation systems, and energy-efficient buildings. However, the upfront costs associated with deploying green technologies and infrastructure can be a barrier for businesses, particularly small and medium-sized enterprises, requiring innovative financing mechanisms and supportive policies to accelerate adoption.

2. Overcoming Regulatory Barriers: Regulatory barriers and policy uncertainties can hinder the adoption of sustainable practices and technologies, creating challenges for businesses seeking to transition to a green economy. Governments play a crucial role in setting clear and consistent regulatory frameworks, providing incentives and subsidies for green investments, and enforcing environmental standards to facilitate the transition towards sustainability.

3. Changing Consumer Behavior and Market Dynamics: Shifting consumer preferences and market dynamics pose challenges for businesses operating in traditional industries that are facing increasing pressure to adopt sustainable practices and reduce their environmental footprint. Companies must adapt to changing consumer expectations, communicate their sustainability efforts transparently, and differentiate themselves in the marketplace by offering innovative and sustainable products and services that meet evolving consumer demands.

4. Skills and Talent Development: The transition to a green economy requires a skilled workforce equipped with knowledge and expertise in sustainability, renewable energy, green technologies, and environmental management. However, there is a shortage of skilled professionals in these fields, creating a need for investments in education, training, and capacity-building programs to develop the next generation of green leaders and entrepreneurs.

In conclusion, while the green economy offers immense opportunities for businesses to innovate, create value, and contribute to sustainable development, navigating the challenges associated with the transition requires strategic planning, collaboration, and commitment from all stakeholders. By addressing these challenges and seizing opportunities, businesses can position themselves to thrive in the green economy of the future while driving positive environmental and social impact.

3.4. Sustainable Materials and Technology

Sustainable Sourcing of Materials

Sustainable sourcing involves selecting materials and resources that have minimal environmental impact throughout their lifecycle, from extraction or cultivation to processing, manufacturing, use, and disposal. Businesses can adopt sustainable sourcing practices by prioritizing renewable and recyclable materials, reducing waste and emissions, minimizing water and energy consumption, and ensuring ethical labor

practices throughout the supply chain.

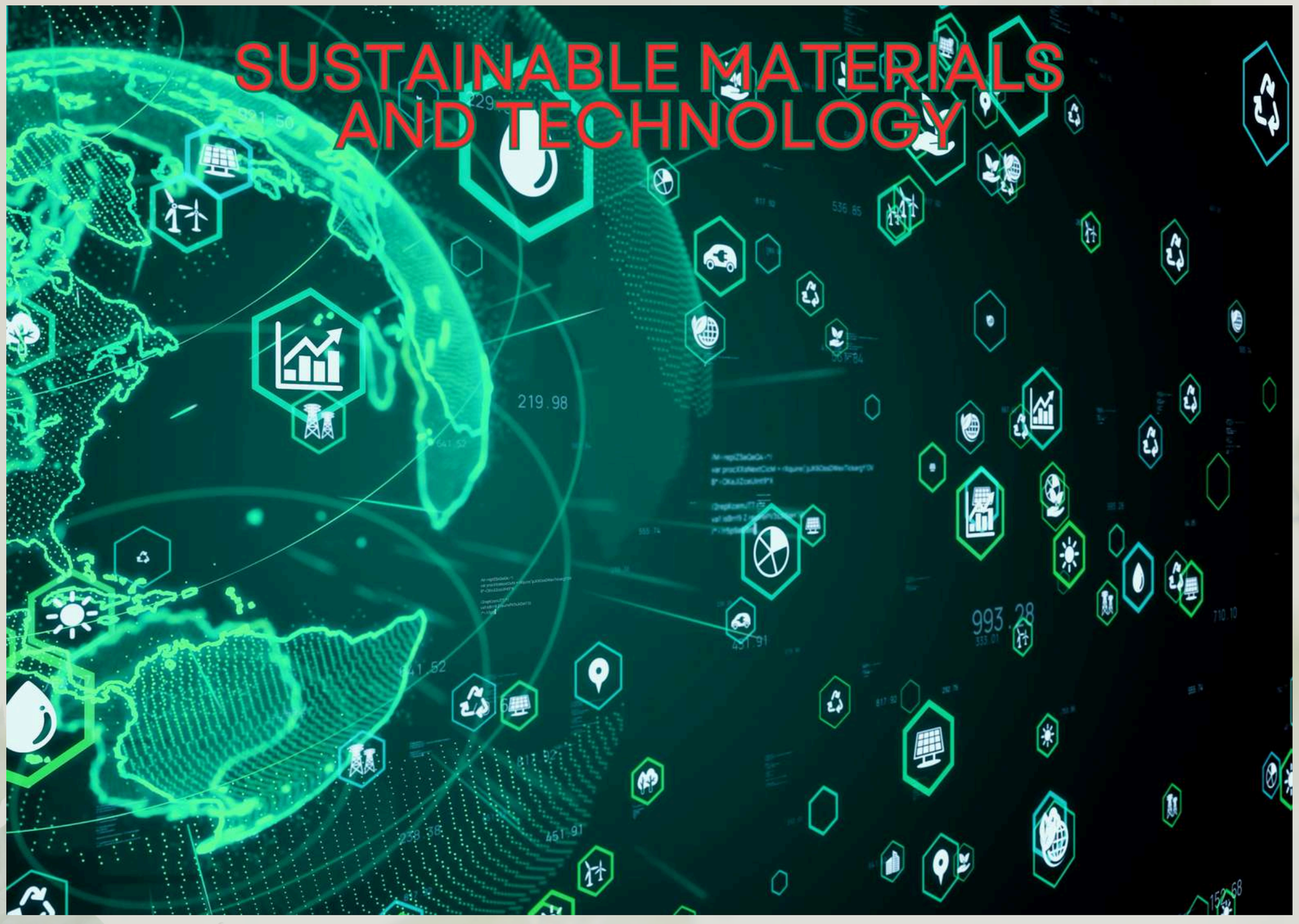
Innovative Green Technologies

Green technologies encompass a wide range of innovations and solutions that enable businesses to reduce their environmental footprint, increase resource efficiency, and transition to sustainable business models. These technologies span various sectors, including energy, transportation, agriculture, manufacturing, construction, and waste management. Examples of green technologies include renewable energy systems (solar panels, wind turbines), energy-efficient appliances and equipment, electric vehicles, green building materials, water-saving technologies, and waste-to-energy solutions.

Benefits of Sustainable Materials and Technology

• Environmental Conservation: Sustainable materials and technologies help conserve natural resources, reduce pollution and waste generation, mitigate greenhouse gas emissions, and preserve ecosystems and biodiversity.

• Resource Efficiency: By optimizing resource use and minimizing waste, sustainable materials and technologies enhance resource efficiency, reduce production costs, and improve overall operational efficiency for businesses.



• Innovation and Competitiveness: Investing in sustainable materials and technologies drives innovation, fosters creativity, and enhances competitiveness for businesses by enabling them to differentiate their products and services, meet regulatory requirements, and adapt to changing market demands.

• Risk Mitigation: Adopting sustainable materials and technologies reduces business risks associated with resource scarcity, regulatory compliance, reputational damage, and climate change impacts, thereby enhancing resilience and long-term viability.

Challenges in Implementing Sustainable Materials and Technology

• Cost and Affordability: The initial costs of adopting sustainable materials and technologies can be higher than conventional alternatives, posing challenges for businesses, particularly small and medium-sized enterprises with limited financial resources. However, over the long term, investments in sustainability often lead to cost savings through reduced resource consumption, improved efficiency, and enhanced brand reputation.

• Technical Complexity: Implementing sustainable materials and technologies may require specialized knowledge, expertise, and technical skills, which may not be readily available within organizations. Businesses may face challenges in identifying suitable technologies, integrating them into existing processes, and training employees to operate and maintain them effectively.

• Supply Chain Complexity: Ensuring the sustainability of materials and technologies throughout the supply chain requires collaboration and transparency among multiple stakeholders, including suppliers, manufacturers, distributors, and customers. Managing complex supply chains, conducting due diligence on suppliers, and verifying compliance with sustainability standards can be challenging for businesses, particularly those with global operations.

• Regulatory Compliance: Meeting regulatory requirements and standards for sustainable materials and technologies can be challenging due to the lack of harmonization and consistency across jurisdictions. Businesses must navigate a complex landscape of regulations, certifications, and reporting requirements to ensure compliance and avoid legal and reputational risks.

In summary, sustainable materials and technologies play a crucial role in enabling businesses to transition to more environmentally friendly and socially responsible practices. While challenges exist in implementing sustainable solutions, the benefits of investing in sustainability outweigh the costs, offering opportunities for innovation, competitiveness, and long-term success. By embracing sustainable materials and

technologies, businesses can contribute to building a more sustainable and resilient economy for future generations.

3.5. Success Stories in Green Business

Case Studies of Successful Green Businesses

Here are several case studies of successful green businesses from various industries, highlighting their innovative approaches, sustainable practices, and positive impact on the environment and society.

·Tesla Inc.: Revolutionizing the Automotive Industry

Tesla Inc., founded by Elon Musk in 2003, has become a global leader in electric vehicles (EVs) and sustainable energy solutions. Tesla's mission is to accelerate the world's transition to sustainable energy by designing and manufacturing high-performance electric cars, energy storage systems, and solar products.

·Patagonia: Leading the Way in Sustainable Apparel

Patagonia, a renowned outdoor apparel company founded by Yvon Chouinard in 1973, is committed to environmental conservation and social responsibility. Patagonia has implemented innovative initiatives such as the "Worn Wear" program, which encourages custom materials in its products.

• **Interface Inc.: Pioneering Sustainable Flooring Solutions**
Interface Inc., a global leader in commercial flooring solutions, has been at the forefront of sustainability and corporate responsibility since the 1990s. Interface's "Mission Zero" commitment aims to eliminate negative environmental impacts by 2020 through initiatives such as carbon-neutral manufacturing, closed-loop recycling, and sustainable product design.

• **Beyond Meat: Redefining the Future of Food**
Beyond Meat, founded by Ethan Brown in 2009, is revolutionizing the food industry with its plant-based meat alternatives. Beyond Meat's products offer consumers the taste and texture of meat while significantly reducing environmental impact, including greenhouse gas emissions, water usage, and land footprint associated with conventional animal agriculture.

• **IKEA: Integrating Sustainability into Business Strategy**
IKEA, the Swedish furniture retailer known for its affordable and stylish home furnishings, has made sustainability a core pillar of its business strategy. IKEA's sustainability initiatives include sourcing sustainable materials, reducing energy and water consumption, minimizing waste through circular economy practices, and investing in renewable energy projects.

• **Unilever: Driving Sustainable Growth through Purposeful Brands**
Unilever, a multinational consumer goods company, has embraced sustainability as a key driver of business growth and innovation. Unilever's Sustainable Living Plan sets ambitious targets for reducing environmental footprint, improving social impact, and enhancing livelihoods across its value chain, while also driving long-term shareholder value.

• **The Body Shop: Ethical Beauty and Social Activism**
The Body Shop, a British cosmetics and skincare company founded by Anita Roddick in 1976, is renowned for its commitment to ethical sourcing, cruelty-free products, and social activism. The Body Shop's campaigns on issues such as animal testing, environmental conservation, and human rights have made it a pioneer in ethical beauty and a catalyst for positive change.

• **Ecovative Design: Harnessing the Power of Mushroom Materials**
Ecovative Design, a biotechnology company founded by Eben Bayer and Gavin McIntyre in 2007, is revolutionizing packaging and materials manufacturing with its innovative use of mycelium, the root structure of mushrooms, as a sustainable alternative to plastic and foam. Ecovative's mushroom-based materials are biodegradable, renewable, and compostable, offering a solution to the global plastic pollution crisis.

• **Seventh Generation:** Leading the Way in Sustainable Household Products
Seventh Generation, a Vermont-based company founded in 1988, specializes in producing environmentally friendly household and personal care products. Seventh Generation is committed to using plant-based ingredients, minimizing packaging waste, and promoting transparency and accountability in its supply chain. The company's focus on sustainability has earned it a loyal customer base and industry recognition for its leadership in green business practices.

• **Ørsted: Transforming Energy with Offshore Wind**
Ørsted, formerly known as DONG Energy, is a Danish renewable energy company that has emerged as a global leader in offshore wind power. Ørsted's ambitious vision is to create a world that runs entirely on green energy, with a focus on offshore wind farms as a key renewable energy source. The company's investments in offshore wind technology and projects have helped drive down costs, increase efficiency, and accelerate the transition to a low-carbon energy future.

• **Natura & Co.: Empowering Beauty with Environmental Responsibility**
Natura & Co., a Brazilian multinational cosmetics and personal care company, is committed to promoting biodiversity conservation, sustainable sourcing, and social inclusion in the beauty industry. Natura's acquisition of The Body Shop and Avon has expanded its global reach and impact, while also strengthening its commitment to ethical and sustainable business practices. The company's innovative products and business model prioritize environmental and social responsibility, setting a new standard for the beauty industry.

• **Grameen Bank: Empowering Communities through Microfinance**
Grameen Bank, founded by Nobel laureate Muhammad Yunus in Bangladesh in 1983, pioneered the concept of microfinance as a tool for poverty alleviation and sustainable development. Grameen Bank provides small loans to impoverished individuals, particularly women, to start their own businesses and improve their livelihoods. By empowering communities with access to financial services and entrepreneurship opportunities, Grameen Bank has transformed the lives of millions of people and demonstrated the potential of social entrepreneurship to create positive change.

• **Ecotricity: Greening the Energy Grid with Renewable Power**
Ecotricity, a British renewable energy company founded by Dale Vince in 1995, is dedicated to accelerating the transition to a low-carbon economy through the generation and distribution of renewable electricity. Ecotricity's pioneering approach includes the development of wind farms, solar parks, and green gas production facilities, as well as investments in electric vehicle charging infrastructure and sustainable transportation solutions. By prioritizing environmental sustainability and community engagement,

Ecotricity is driving positive change in the energy sector and inspiring others to embrace renewable energy solutions.
Each of these success stories exemplifies the transformative power of green business practices, demonstrating how companies can achieve commercial success while also making a positive impact on the planet and society. By learning from these examples and adopting similar approaches, businesses can contribute to building a more sustainable and prosperous future for all.

Lessons Learned and Best Practices

1. Commitment to Purpose: Successful green businesses demonstrate a strong commitment to their environmental and social purpose. They align their business strategies, operations, and values with sustainability principles, prioritizing long-term impact over short-term gains.

2. Innovation and Collaboration: Green businesses leverage innovation and collaboration to drive sustainability across their value chain. They invest in research and development to develop cutting-edge technologies and solutions, collaborate with stakeholders to address complex challenges, and foster a culture of creativity and experimentation.

3. Transparency and Accountability: Transparency and accountability are essential for building trust and credibility with stakeholders. Green businesses are transparent about their environmental and social performance, disclose relevant information about their products and practices, and hold themselves accountable for achieving sustainability goals.

4. Circular Economy Practices: Embracing circular economy practices is key to minimizing waste, maximizing resource efficiency, and closing the loop on materials and products. Green businesses adopt circular business models, such as product-as-a-service, remanufacturing, and recycling, to reduce environmental impact and create value from waste streams.

5. Stakeholder Engagement: Engaging stakeholders, including employees, customers, suppliers, investors, and communities, is critical for driving sustainability initiatives and fostering positive relationships. Green businesses listen to stakeholder feedback, involve them in decision-making processes, and collaborate with them to co-create solutions that deliver shared value.

6. Continuous Improvement: Continuous improvement is essential for staying ahead of the curve in the fast-evolving landscape of sustainability. Green businesses embrace a

culture of learning and adaptation, regularly monitoring their environmental and social performance, benchmarking against industry standards, and seeking opportunities for innovation and optimization.

7. Resilience and Adaptability: Building resilience and adaptability is crucial for navigating the uncertainties and challenges of a changing climate and economy. Green businesses anticipate risks, diversify their supply chains, invest in renewable energy and energy efficiency, and develop contingency plans to ensure business continuity and long-term viability.

8. Leadership and Advocacy: Green businesses demonstrate leadership and advocacy on sustainability issues, both within their industries and in broader society. They advocate for policies that support sustainable development, engage in industry collaborations and partnerships, and use their influence to drive positive change on environmental and social issues.
By embracing these lessons learned and best practices, businesses can position themselves as leaders in the transition to a more sustainable and equitable future, while also driving innovation, growth, and positive impact for society and the environment.

3.6. Starting a Green Business

"In a world where the environment is increasingly visible and under threat, the need for green business practices is not just a moral imperative but a strategic necessity. Companies must recognize that environmental issues are central to business success and can be a source of competitive advantage." (Esty, D. C., & Winston, A. S. (2006). Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage. Yale University Press). Starting a green business requires careful planning, innovation, and commitment to sustainability principles. Here are the key steps and considerations for aspiring entrepreneurs looking to launch a green business.

Identifying Opportunities

1. Market Trends and Consumer Demand: Conduct market research to identify emerging trends and consumer preferences in sustainability and environmental conservation. Look for growing demand for eco-friendly products and services, such as renewable energy, organic food, sustainable fashion, green building materials, and ethical consumer goods. Analyze market gaps and unmet needs that your green business can address, leveraging consumer insights and market data to inform your business strategy.

2. Regulatory and Policy Landscape: Stay informed about regulatory and policy developments related to environmental protection, climate change mitigation, and sustainable development. Identify regulatory incentives, mandates, subsidies, and tax credits that support green businesses and renewable energy projects. Explore opportunities for collaboration with government agencies, industry associations, and advocacy groups to influence policy decisions and create a favorable business environment for sustainability initiatives.

3. Technological Innovations and Solutions: Keep abreast of technological advancements and innovations in green technologies, renewable energy, clean transportation, waste management, and resource efficiency. Look for opportunities to leverage technology to improve environmental performance, reduce costs, and enhance competitiveness. Explore partnerships with technology startups, research institutions, and industry leaders to access cutting-edge solutions and drive innovation in your green business.

4. Circular Economy and Sustainable Supply Chains: Embrace the principles of the circular economy to minimize waste, maximize resource efficiency, and create value from by-products and waste streams. Identify opportunities to optimize your supply chain, source sustainable materials, and implement closed-loop systems that reduce environmental impact and enhance economic value. Collaborate with suppliers,

manufacturers, and logistics partners to design sustainable supply chain solutions that prioritize environmental stewardship and social responsibility.

5. Community Engagement and Social Impact: Engage with local communities, stakeholders, and social enterprises to identify opportunities for positive social impact and community development. Look for ways to address social inequalities, create employment opportunities, and empower marginalized groups through your green business activities. Consider investing in community development projects, education initiatives, and capacity-building programs that support sustainable livelihoods and inclusive growth.

6. Partnerships and Collaborations: Explore strategic partnerships and collaborations with like-minded organizations, businesses, nonprofits, and government agencies that share your commitment to sustainability. Look for opportunities to leverage complementary strengths, resources, and expertise to scale your green business and amplify its impact. Collaborate on joint initiatives, research projects, and advocacy campaigns that advance shared goals and drive positive change in your industry and community.

By proactively identifying and seizing opportunities in these areas, aspiring green entrepreneurs can position their businesses for success in the growing market for sustainable products and services. Embracing innovation, collaboration, and social responsibility will enable green businesses to create value for customers, communities, and the planet, while also driving long-term profitability and growth.

Steps to Launching a Green Business

1. Identify Your Passion and Purpose: Begin by identifying your passion for sustainability and environmental conservation. What issues or causes resonate with you? What are you passionate about changing or improving in the world? By aligning your business idea with your personal values and purpose, you'll be more motivated and committed to making a positive impact.

2. Conduct Market Research: Before launching your green business, conduct thorough market research to identify opportunities and challenges in your target market. Who are your potential customers? What are their needs, preferences, and behaviors? What existing green businesses are operating in your industry, and how can you differentiate yourself? Understanding the market landscape will help you refine your business concept and develop a competitive strategy.

3. Define Your Value Proposition: Clearly define your value proposition—what unique value do you offer to customers and stakeholders? How does your green business address

unmet needs or solve pressing environmental problems? Your value proposition should communicate the benefits of your products or services in a compelling and differentiated way, attracting customers and investors alike.

4. Develop a Sustainable Business Model: Designing a sustainable business model is essential for aligning your economic goals with environmental and social objectives. Consider how you can integrate sustainability into every aspect of your business, from sourcing materials to production processes, distribution channels, and end-of-life management. Explore innovative business models such as product-as-a-service, circular economy, and sharing economy to maximize resource efficiency and minimize waste.

5. Secure Funding and Resources: Launching a green business may require upfront investment in research, development, production, marketing, and operations. Explore various funding options, including grants, loans, venture capital, crowdfunding, and impact investing, to finance your business venture. Consider partnering with sustainability-focused investors, accelerators, and incubators that share your vision and values.

6. Build Partnerships and Collaborations: Collaboration is key to success in the green business space. Build strategic partnerships with suppliers, manufacturers, distributors, and other stakeholders who share your commitment to sustainability. Collaborate with industry associations, nonprofits, government agencies, and academia to access resources, expertise, and networks that can support your business growth.

7. Leverage Technology and Innovation: Harnessing technology and innovation can unlock new opportunities for sustainability and competitive advantage. Explore cutting-edge technologies such as renewable energy, Internet of Things, artificial intelligence, blockchain, and biotechnology to optimize resource use, improve efficiency, and create innovative products and services.

8. Establish a Strong Brand and Marketing Strategy: Building a strong brand and marketing strategy is essential for attracting customers, raising awareness, and building credibility in the marketplace. Communicate your green business's mission, values, and unique selling proposition through branding, storytelling, and marketing campaigns that resonate with your target audience.

9. Measure and Communicate Impact: Finally, measure and communicate the impact of your green business on the environment, society, and economy. Implement key performance indicators and metrics to track your progress towards sustainability goals, such as carbon emissions reduction, waste diversion, energy efficiency, and social impact. Share your success stories, achievements, and lessons learned with stakeholders to inspire others and drive positive change in your industry.
By following these steps and principles, aspiring entrepreneurs can turn their vision for a green business into reality, creating value for customers, society, and the planet. Whether you're launching a sustainable startup or transforming an existing business, embracing sustainability as a core principle will position you for long-term success in the green economy.

3.7. Accessible Green Jobs for Young Entrepreneurs

Here are some green job ideas leveraging natural resources or ecosystems with minimal to no startup costs. These jobs are more about working directly with the environment to generate an income, often requiring knowledge of local ecosystems, minimal equipment, and a hands-on approach.

Beekeeping

• What It Involves: Raising bees and producing honey and other bee products.

• Startup Costs: Initial investment in hives and bees; however, some local agricultural programs may offer grants or loans.

• Earning Potential: Sale of honey, beeswax, propolis, and potentially offering pollination services to local farmers.

Foraging and Wildcrafting

• What It Involves: Harvesting wild plants, herbs, mushrooms, and other natural products for sale.

• Startup Costs: Knowledge of local ecosystems and foraging laws; minimal equipment like baskets and pruning shears.

• Earning Potential: Selling foraged goods to local restaurants, at farmers' markets, or online. Specialty mushrooms and medicinal herbs often fetch higher prices.

Community Gardening

• What It Involves: Participating in or managing community gardens to grow produce for sale.

• Startup Costs: Seeds and gardening tools; many community gardens provide plots and resources for a low fee or volunteer hours.

• Earning Potential: Selling produce directly to consumers, at local markets, or through community-supported agriculture programs.

Native Plant Nursery

• What It Involves: Growing and selling native plants, which are in demand for landscaping and ecological restoration projects.

• Startup Costs: Seeds or cuttings (often can be collected for free with permission), pots, and soil.

• Earning Potential: Sales to homeowners, landscapers, and restoration projects looking for drought-tolerant, native species.

Aquatic Resources

• What It Involves: Harvesting edible or decorative aquatic plants, fish, or shellfish from natural or semi-natural systems.

• Startup Costs: Depending on local regulations, may require permits; minimal equipment for harvesting.

• Earning Potential: Sale of fresh or processed aquatic goods; specialty markets or restaurants may pay premium prices.

Eco-Tourism Guide

- What It Involves: Guiding tourists through natural areas, educating them about local ecosystems, wildlife, and conservation efforts.
- Startup Costs: Training or certification in guiding, knowledge of local ecology and attractions; minimal equipment such as binoculars, maps, and a first aid kit.
- Earning Potential: Charging fees for guided tours, eco-lodges or resorts may hire guides, and potential for tips from satisfied tourists.

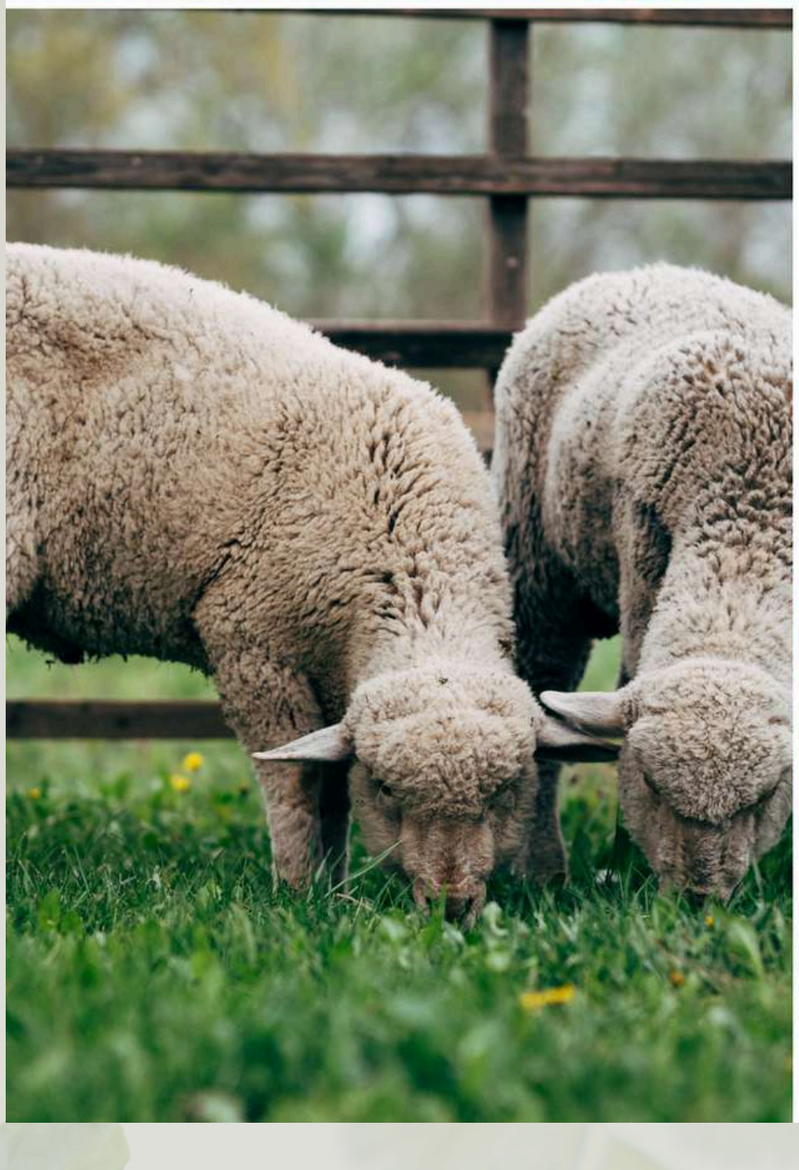
Funded by
the European Union

Organic Farming

• What It Involves: Cultivating crops or raising livestock without synthetic fertilizers, pesticides, or genetically modified organisms.

• Startup Costs: Land rental or purchase, seeds or livestock, farming equipment (which can sometimes be borrowed or rented).

• Earning Potential: Selling organic produce or meat directly to consumers, at farmers' markets, or through subscription box services.



Environmental Education Programs

• What It Involves: Developing and conducting educational programs focused on environmental conservation, sustainability, and eco-awareness.

• Startup Costs: Knowledge in environmental science or education, materials for presentations or workshops.

• Earning Potential: Charging fees for educational sessions, partnering with schools or organizations for workshops, potential for grants or funding from environmental agencies or NGOs.

Nature Photography and Videography

- What It Involves: Capturing images or footage of natural landscapes, wildlife, and outdoor activities for sale or licensing.
- Startup Costs: Camera equipment, possibly courses or workshops to improve photography skills.
- Earning Potential: Selling prints, licensing images to publications or companies for marketing purposes, offering photography services for events or tourism agencies.

Sustainable Fashion and Crafts

• What It Involves: Creating clothing, accessories, or crafts using sustainable materials sourced from nature, such as organic cotton, bamboo, or recycled materials.
• Startup Costs: Materials for crafting, possibly equipment for sewing or crafting.
• Earning Potential: Selling handmade products online, at craft fairs, or through boutique stores specializing in eco-friendly goods.

Seaweed Farming

• What It Involves: Cultivating various species of seaweed for commercial use, such as food products, cosmetics, or fertilizers.

• Startup Costs: Access to coastal areas, knowledge of seaweed cultivation techniques, minimal equipment for harvesting.

• Earning Potential: Selling dried seaweed products to food manufacturers, restaurants, or direct to consumers.

Mushroom Cultivation

• What It Involves: Growing mushrooms, such as oyster mushrooms or shiitake, for sale to restaurants, markets, or individuals.

• Startup Costs: Substrate materials, mushroom spores or spawn, basic equipment for cultivation.

• Earning Potential: Selling fresh or dried mushrooms to local markets, restaurants, or through subscription box services.

Eco-Friendly Pest Control

• What It Involves: Providing pest control services using environmentally friendly methods, such as introducing natural predators or using organic repellents.

• Startup Costs: Knowledge of local pests and their natural predators, possibly some investment in initial supplies or equipment.

• Earning Potential: Charging fees for pest control services, targeting environmentally conscious clients such as organic farms or eco-lodges.

Eco-Friendly Cleaning Products

• What It Involves: Creating and selling eco-friendly cleaning products made from natural ingredients like vinegar, baking soda, or essential oils.

• Startup Costs: Ingredients for creating cleaning products, packaging materials, marketing efforts.

• Earning Potential: Selling cleaning products directly to consumers online, at farmers' markets, or through eco-friendly stores.

Wildlife Monitoring and Surveys

• What It Involves: Conducting surveys and monitoring programs to assess wildlife populations, habitat quality, or environmental changes.

• Startup Costs: Training in wildlife monitoring techniques, possibly some investment in equipment like trail cameras or GPS units.

• Earning Potential: Contracting with government agencies, NGOs, or private landowners for wildlife surveys, potential for research grants or funding for monitoring projects.

Chapter 4: The Convergence of Art, Photography, and Sustainability

4.1. Our project in a new perspective

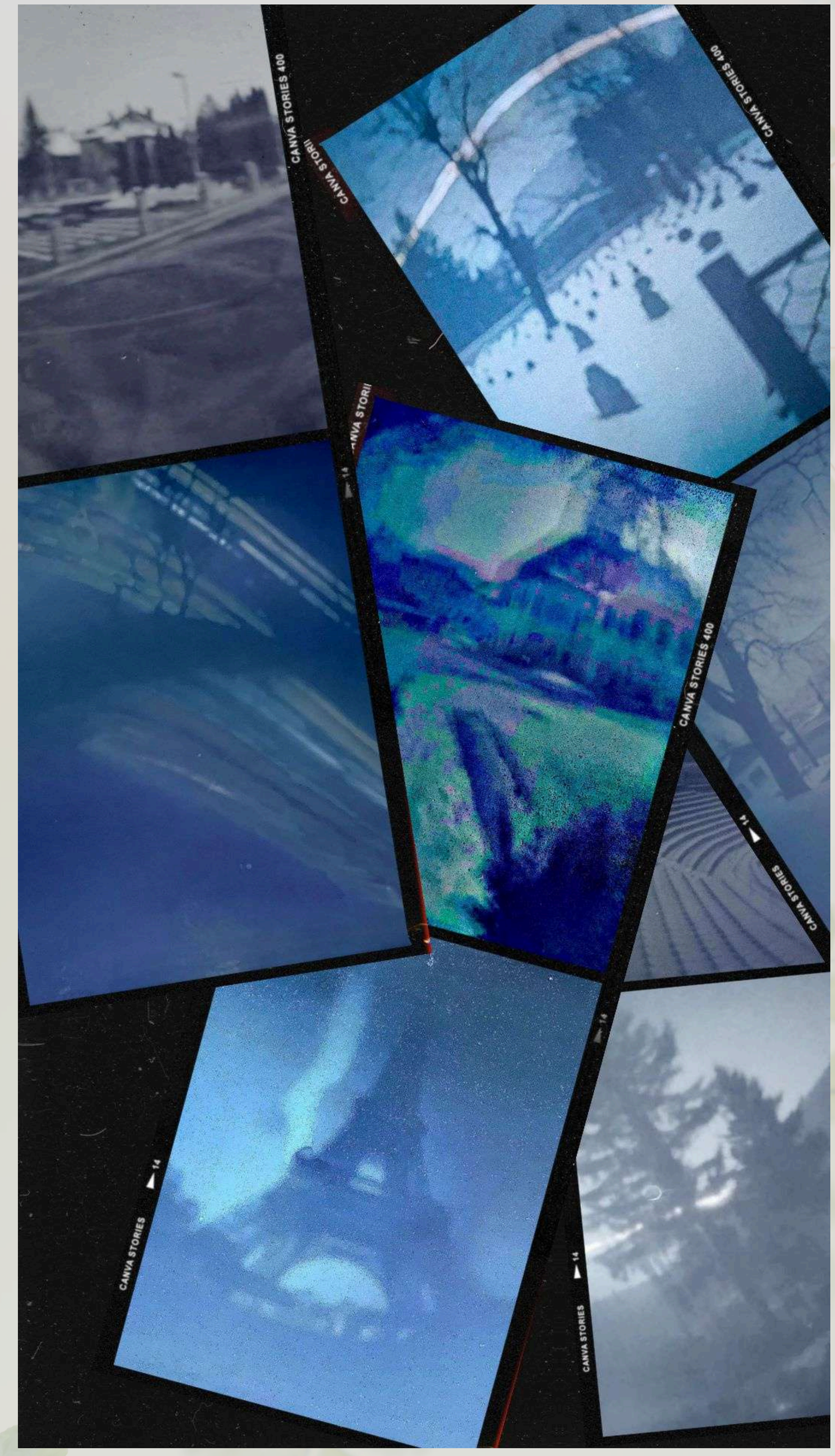
In the context of a project centred on sustainability through photography, the deliberate choice to employ both pinhole and digital photography techniques serves as a metaphor for the harmonious integration of tradition and innovation in the pursuit of environmental stewardship. This dual approach enriches the project's pedagogical framework and also symbolises the broader dialogue between preserving our natural heritage and embracing contemporary methods to advocate for sustainable living. The motivation behind this choice is to draw parallels between the photographic methodologies and the overarching goals of environmental conservation through our Erasmus+ project. Pinhole and digital photos from our Training Course:

Pinhole Photography: Embracing Tradition to Protect Nature

Pinhole photography, with its rudimentary origins and simplistic approach, represents a deep reverence for the natural world and its intrinsic values. This technique, devoid of electronic components and reliant on basic principles of light and time, serves as a homage to the traditional ways of living harmoniously with nature. The pinhole camera's capacity to capture images without the aid of modern technology mirrors the sustainable practices of past generations, who adeptly balanced human needs with environmental preservation. Employing pinhole photography in our sustainability project shows the importance of looking back to simpler times for wisdom in minimising our ecological footprint. It embodies the idea that sometimes, the most impactful actions for protecting nature come from understanding and applying age-old principles of resourcefulness and respect for the environment.

Funded by
the European Union

Collage with our pinhole photos:



Digital Photography: Addressing Current Needs through Innovation

Conversely, digital photography represents the cutting edge of technological advancement, offering immediacy, versatility, and a broad reach. In the context of environmental activism, digital photography acts as a powerful tool for contemporary communication, capable of capturing and disseminating images that inspire action and awareness at an unprecedented scale. This technique aligns with the current needs of the environmental movement, which demands rapid response and widespread outreach to address pressing issues like climate change and biodiversity loss. Digital photography's ability to connect with a global audience virtually instantaneously exemplifies how modern innovation can be harnessed to advocate for sustainability, demonstrating that using new technologies can significantly amplify our impact on conserving the environment.

Photo from our Digital Photography Workshop:

The Confluence of Tradition and Innovation

The juxtaposition and integration of pinhole and digital photography in our project reflect a broader message: that the path to sustainable living is not about choosing between tradition and innovation but rather finding a synergy that leverages the strengths of both. Pinhole photography reminds us of the value in simplicity, patience, and a direct connection with our surroundings, teaching us that sustainable solutions can stem from minimalistic approaches. Digital photography empowers us to take immediate action, share knowledge widely, and mobilise communities across the globe. Together, these techniques illustrate that the preservation of nature and the pursuit of a sustainable future combine the wisdom of the past with the possibilities of the present.

Employing both pinhole and digital photography in a sustainability project is a deliberate, symbolic choice that shows the project's thematic focus. It highlights how tradition and innovation can converge for the benefit of nature and sustainable living, offering a rich perspective on environmental advocacy. This approach enriches the participants' learning experience and also serves as a metaphor for the broader environmental movement's need to integrate diverse strategies and perspectives in its quest for sustainability. Photo from our Training Course:

4.2. Introduction to Photography and Environmental Advocacy

The role of art in societal change

Photography, as a form of art, has long been recognized for its capacity to create societal change. This transformative power is particularly evident in the realm of environmental advocacy, where the visual narrative of photography serves as a compelling conduit for awareness, education, and action. The intertwining of art and environmentalism through photography conveys the beauty and fragility of our natural world and also underscores the urgent need for its preservation and protection.

The role of art in societal change cannot be understated. Artistic expressions, with photography at their core, possess the unique ability to evoke emotions, provoke thought, and inspire action among diverse audiences. Through the lens of the camera, photographers capture moments that show the unspeakable, translate complex issues into visuals, and foster a deeper connection between the viewer and the subject matter. This emotional and cognitive engagement is essential for mobilising public support and driving collective action towards environmental sustainability.

Overview of how photography has been used in environmental advocacy

European photographers and photo projects used photography to advocate for environmental causes. Sebastião Salgado’s "Genesis" project, for instance, offers a profound exploration of untouched landscapes and wildlife, aiming to awaken a sense of wonder and responsibility towards the planet (https://www.photographyoffice.com/blog/2013/12/masters-of-photography-sebastiao-salgado-genesis-the-legacy-of-planet-earth). Also, Nick Brandt's series on the disappearing natural world in Africa challenges viewers to confront the reality of habitat loss and extinction (https://www.houkgallery.com/artists/31-nick-brandt/), his work exemplifying the impact of such photography projects on environmental consciousness (https://www.nickbrandt.com/essays/essays:-this-empty-world/this-empty-world-concept/).

The overview of how photography has been used in environmental advocacy reveals a rich history of engagement and impact. From early depictions of industrial era consequences on landscapes to contemporary focus on climate change, biodiversity loss,

and pollution, photography has been an important tool in documenting environmental degradation and, on the other hand, successes. These visual narratives serve as historical records and also, as catalysts for policy change and environmental activism.

The photography have the power to transcend cultural and linguistic barriers, making the global environmental crisis a personal and actionable issue for individuals worldwide.
In Europe, the tradition of blending photography with environmental advocacy has been particularly impactful, given the continent's diverse ecosystems and pressing ecological challenges. The work of photographers such as Yann Arthus-Bertrand, with his aerial photography project "Earth from Above", provides stunning perspectives on the impact of human activity on the planet. These images have spurred discussions and actions on conservation efforts, sustainable living, and the importance of global cooperation in addressing environmental issues (https://www.yannarthusbertrandphoto.com/categorie-produit/from-above/).

Photography's role in environmental advocacy is further amplified through exhibitions, publications, and digital platforms, reaching wider audiences and engaging the public in dialogues about conservation and sustainability. The visual appeal and accessibility of photography make it an effective medium for raising awareness and educating people about ecological issues, fostering a culture of responsibility and proactive engagement with the environment.

The advent of social media and digital technology has expanded the reach and immediacy of environmental photography, allowing for real-time dissemination of images and stories that can influence public opinion and policy at an unprecedented scale. Citizen photographers, armed with smartphones, have become important players in environmental advocacy, documenting local issues and sharing them with a global audience, democratising the act of environmental storytelling.

The convergence of photography and environmental advocacy represents a powerful alliance in the fight for a sustainable future. Through capturing the Earth’s majesty and its plight, photography bears witness to the ongoing environmental challenges and also serves as a signal for preservation and action. As we move forward, the continued evolution of this medium will play a crucial role in shaping public discourse

on sustainability, inspiring a new generation of activists, and contributing to the collective efforts to safeguard our planet.

4.3. The Power of Photography in Environmental Awareness

Discussing the impact of visual storytelling on public perception

Photography, with its capacity for visual storytelling, plays an important role in shaping public perception of environmental issues. This medium's intrinsic power lies in its ability to make abstract or distant environmental concepts palpably real to the viewer, converting awareness into concern and concern into action. Through carefully crafted images, photographers convey the beauty of natural environments, the consequences of human activity, and the urgent need for conservation, engaging the public in a visual dialogue about the planet's future.

The impact of photography on environmental awareness is effective because visual stories transcend the complexity of environmental data, presenting it in a format that is instantly accessible and emotionally resonant. When people see the stark contrast between the untouched beauty of natural landscapes and the devastation wrought by pollution or deforestation, they are moved to reflect on their own environmental footprints. This reflective process is critical in fostering a more personal connection to the environment, one that motivates behavioural change and advocacy for policy reforms.

Historical examples of photography influencing environmental policy and public action

Historically, photography has been a catalyst for environmental policy and public action. An early example is the work of Ansel Adams, whose images of American wilderness areas in the mid-20th century were instrumental in the development of the national parks system and the broader environmental movement in the United States (https://www.anseladams.com/ansel-adams-the-role-of-the-artist-in-the-environmental-movement/).

While Adams is a well-known figure globally, Europe has its own rich history of photographers who have influenced environmental policy and consciousness.

In the United Kingdom, the photography of Sir Simon Marsden, with his haunting landscapes, has conveyed the fragility of the natural and built environment, prompting discussions about conservation and heritage (https://www.shutterbug.com/content/remembering-sir-simon-marsden-master-infrared-photography). Similarly, the French photographer Yann Arthus-Bertrand's aerial project "Earth from Above" offered a bird's-eye view of the impact of human activity on natural landscapes, influencing public opinion and policy discussions on a global scale (https://www.mcgill.ca/newsroom/channels/news/earth-above-9794).

These historical examples show photography's unique ability to influence environmental policy and action. Photography can alter perceptions and attitudes, creating a shift towards more sustainable practices and support for environmental legislation. Governments and policymakers, faced with the visual evidence of environmental degradation, are often compelled to act, implementing measures to protect vulnerable ecosystems, regulate pollution, or commit to renewable energy sources.

Also, images that capture the effects of climate change, biodiversity loss, or pollution can go viral through social media, reaching millions of viewers around the globe in a matter of hours. This immediacy and scale of engagement can accelerate public mobilisation and pressure governments and organisations to respond to environmental crises more swiftly and decisively.

Photography also plays an important role in documenting the successes of environmental policy and conservation efforts. Images of restored ecosystems, endangered species recovering in protected areas, or communities thriving through sustainable practices provide hope and encourage continued commitment to environmental stewardship. These positive visual narratives are essential in order to maintain environmental movements, demonstrating that change is possible and that collective action yields results.

The power of photography in environmental awareness cannot be overstated. Through the lens of photographers committed to showcasing the planet's beauty and vulnerabilities, the public is invited to witness the consequences of their actions and the urgency of environmental protection. Historical examples from Europe and beyond

illustrate photography's significant influence on shaping environmental policy and inspiring public action. As we face increasing environmental challenges, the role of photography in visual storytelling continues to be critical in mobilising global efforts towards sustainability and conservation. Visual storytelling in our Training Course:

4.4. Pinhole Photography: Capturing Nature's Essence

Introduction to pinhole photography and its relevance in environmental education

Pinhole photography, with its roots deeply embedded in the early history of photographic science, offers an unique approach to capturing the essence of nature. This type of photography, characterised by the use of a simple box with a tiny aperture instead of a lens, requires patience with the subject matter, making it an ideal tool for environmental education and advocacy. The simplicity of the pinhole camera, devoid of the complexities of modern photographic technology, encourages users to focus on the fundamentals of light, composition, and the intrinsic beauty of their natural surroundings.

The relevance of pinhole photography in environmental education stems from its ability to foster a slow, mindful approach to observing the natural world. In an age dominated by instant digital imagery, the deliberate process of setting up a pinhole camera and waiting for the right conditions to capture an image teaches valuable lessons about patience, observation, and respect for nature's rhythms. This hands-on engagement with photography as a craft can deepen participants' connection to the environment, encouraging a more thoughtful and conservation-minded approach to their interactions with the natural world.

Also, the unique aesthetic of pinhole photographs, with their soft focus and wide-angle perspectives, offers a fresh lens through which to view and appreciate nature. The dreamlike quality of these images can evoke a sense of wonder and intrigue, prompting viewers to consider familiar landscapes in new and unexpected ways. This altered perception can be a powerful tool in environmental education, challenging individuals to see beyond the surface and reflect on the complexity and fragility of natural ecosystems.

Workshops that incorporate pinhole photography into their curriculum provide an excellent platform for showcasing the simplicity and depth of this photographic method. Participants are often amazed by the process of creating a functional camera from

everyday materials, a task that demystifies the technology of photography and emphasises the accessibility of artistic expression. By focusing on the basics - light, time, and material - these workshops convey the idea that meaningful connections with nature can be forged with minimal impact on the environment.

Showcasing examples from the workshop, focusing on simplicity and the deep connection with the subject matter

Examples from our pinhole photography workshops highlight the diverse ways in which this technique can capture the essence of nature. Images produced during these sessions can range from serene landscapes and detailed close-ups of natural textures to dynamic portrayals of environmental phenomena, such as changing weather patterns or the movement of the sun. These photographs serve as artistic expressions and also as visual narratives that can educate and inspire action towards environmental conservation.

The process of creating and discussing pinhole photographs within a workshop setting fosters a community of learners who are deeply engaged with both the art form and the environmental themes it explores. Through group critiques and future exhibitions, participants share their visions of nature, learn from each other's perspectives, and collectively develop understanding of environmental issues. This collaborative learning environment amplifies the impact of pinhole photography as a tool for environmental advocacy, creating a shared space for reflection, inspiration, and dialogue.

Pinhole photography stands as a proof to the power of simplicity in art and education. Its application in environmental education workshops offers a unique method for exploring and understanding the natural world, promoting a slow, deliberate approach to photography that mirrors the mindfulness required for true environmental stewardship.

Through the creation of evocative, thought-provoking images, participants and viewers alike are invited to reconnect with the environment, fostering a sense of responsibility and urgency in the face of ecological challenges. In capturing the essence of nature, pinhole photography shows the beauty and fragility of our planet, serving as a reminder of the need to protect and preserve it for future generations.

Collage with our pinhole photos:

I. Creating a solargraphy camera from half a can is an inventive way to capture the path of the sun across the sky over long periods.
This project blends simple materials with the magic of long-exposure photography to produce images that trace the sun's movement. Here's how to embark on this fascinating photographic experiment:

1. Gather materials:

- A clean, empty half-sized soda or beer can;
- Photographic paper;
- Pin or needle;
- Black tape;
- Scissors or a craft knife;
- Waterproof sealant (optional).

2. Prepare the can: Cut your can in half, if it is not already, and carefully smooth any sharp edges to prevent injury or damage to the photographic paper. The can will act as both the camera body and lens for this project.

3. Create the pinhole: Using the pin or needle, carefully make a tiny hole in the centre of the can's side. This pinhole should be as round and as small as possible - it is your camera's lens. For precision, place the can against a firm surface when you puncture it.

4. Load the photographic paper: In a completely dark room to prevent any light exposure, cut the photographic paper to fit the curve inside the can. Gently place it inside, ensuring the emulsion side (the side that reacts to light) faces the pinhole. The paper should cover the can's inner curve entirely. Make sure you don't cover the hole!

5. Seal and waterproof the camera: Use black tape to secure the open end of the can, ensuring no light can enter the camera except through the pinhole. If you plan to leave your camera outdoors for an extended period, applying a waterproof sealant around the edges of the tape can offer additional protection.

6. Position and secure the camera: Choose a secure and stable location for your solargraphy camera, where it can remain undisturbed for days, weeks, or even months.

The camera should be positioned with a clear view of the sky, preferably angled slightly upwards to capture the arc of the sun. Use tape, wire, or clamps to fix it in place, ensuring it cannot be moved by wind or animals.

7. Expose your solargraph: The exposure time for solargraphy can vary greatly, ranging from a few weeks to several months, or even years, depending on the desired effect. The longer the exposure, the more sun paths you will capture on your photographic paper.

8. Develop the Image: After the exposure period, retrieve your camera and remove the photographic paper in a dark room. Unlike traditional photography, solargraphy images do not require chemical developing. Instead, scan or photograph the exposed paper under dim light to convert the latent image into a digital file. Inverting the colours and adjusting the contrast in a photo editing software will reveal your solargraphy in its full glory.

Creating a solargraphy camera from a can is not just a photography project, it is an experiment in patience and a unique way to visually explore the celestial movements above us. Each solargraphy is a time capsule, capturing the sun's journey through the sky over time, offering a beautiful intersection of art, science, and nature.

Photo from our Workshop:

II. Constructing a pinhole camera from cardboard is a project that bridges craft and photography, offering a hands-on understanding of how images are captured. Creating a pinhole camera with a full roll of film and the ability to switch between its 12 positions makes this DIY project very exciting. Here is our step-by-step guide to craft a version of a pinhole camera with a full roll of film:

1. Gather your kit: You will need a sturdy cardboard box, black paint, black tape, aluminium foil, a pin, photographic film, a ruler, and a sharp knife or scissors for cutting.

2. Black the box: Start by securing the inside of your box against light leaks. Paint it black inside and either paint it black outside or line it thoroughly with black tape. This step is crucial for creating a dark environment inside your camera, essential for clear, crisp images.

3. Crafting your lens: Pick the front side of your box and cut a small square hole in the middle. Cover this neatly with aluminium foil and secure it with tape. Then, with a pin, poke a tiny, neat hole in the centre of the foil. This is your camera's lens, where all the magic starts.

4. Setting up the film: Now, this is where it gets interesting. To allow for changing positions across the film's 12 exposures, you need to create a simple but effective mechanism inside your box. Attach two spools on either end of the box interior: one to hold the unexposed film and the other to collect the exposed film. Make sure your film is properly aligned with the pinhole and that it can smoothly roll from one spool to the other. You can add a small knob or handle to the spool outside the box to manually advance the film after each exposure.

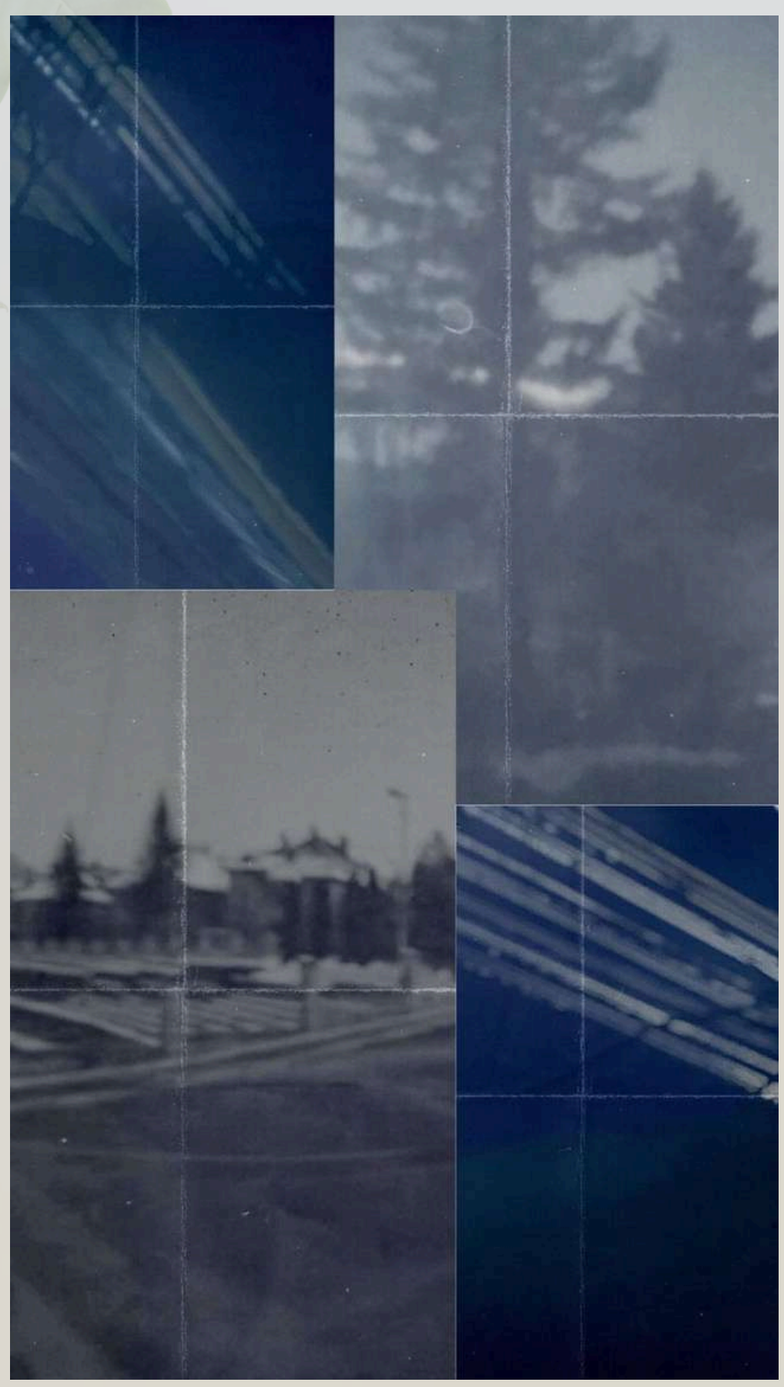
5. Exposure time: To take a picture, cover the pinhole with opaque tape or a black cardboard. When you're ready, remove the tape, exposing the film to light through the pinhole. Exposure times can vary, so feel free to experiment. After exposing, cover the pinhole again, and carefully turn the knob to advance the film to the next position, ready for your next shot.

6. Finishing the roll: Once you have gone through all 12 positions, it is time to see the result of your labour. You need to carefully remove the film in a completely dark room to avoid any light exposure and then proceed with the development process, either at home if you are equipped or at a professional lab.

This pinhole camera project blends the simplicity of pinhole photography with the thrill of shooting multiple exposures on a single roll of film. It is a fantastic way to dive deeper into the mechanics of photography, all the while enjoying the creative process of capturing images. Each photo taken is an experiment and an opportunity to view the world through a new, yet wonderfully basic, lens. So, grab your materials, and let's make some photographic magic!

Photo from our Workshop - Pinhole camera interior and pinhole photos using film:

Funded by
the European Union



4.5. Digital Photography: A Tool for Environmental Activism

Exploring the versatility and immediacy of digital photography in documenting environmental issues

Digital photography has revolutionised how we capture and share our world, offering versatility and immediacy that have become indispensable in the environmental activism. This modern tool allows activists, researchers, and enthusiasts alike to document environmental issues with clarity and speed, providing evidence that can sway public opinion, inform policy, and inspire immediate action. In a world where environmental concerns are increasingly urgent, digital photography serves as a powerful ally in the fight for a sustainable future.

The immediacy of digital photography is perhaps its most potent attribute in environmental activism. Unlike traditional film, which requires processing and development, digital images can be viewed, shared, and distributed instantly. This allows environmental stories to be told in real time, reaching a global audience within seconds. In the case of documenting illegal deforestation, capturing the effects of pollution on wildlife, or showcasing the impacts of climate change on communities, digital photographs can serve as both immediate evidence and a call to action. They provide undeniable proof of environmental degradation and its consequences, making it harder for policymakers to ignore.

Furthermore, digital photography's versatility enhances its effectiveness as a tool for environmental activism. Modern digital cameras and even smartphones are equipped with features that allow for a wide range of photographic techniques - from macro photography that reveals the beauty of a single insect to aerial drones capturing the sweeping devastation of deforested lands. This versatility ensures that every aspect of environmental issues can be documented, from the macroscopic to the microscopic, offering a comprehensive view of the challenges and beauty of our natural world.

Highlighting participant projects that focus on local environmental concerns

Our participants focusing on local environmental concerns highlight the role of digital photography in community-based activism. For instance, a group of activists might use digital photography to document the progression of coastal erosion or the impact of plastic waste on forest life. These images, shared through social media platforms, can

mobilise community action, drive clean-up initiatives, and pressure local authorities to implement more sustainable waste management practices.

Another example is the use of digital photography in citizen science projects, where individuals contribute to global databases by photographing local flora and fauna, tracking seasonal changes, and monitoring biodiversity. These photographs bring valuable data to scientific research and also raise awareness about the richness and vulnerability of local ecosystems. By visually sharing their findings, participants can foster a deeper connection within their communities to the natural world, emphasising the importance of conservation efforts.

Additionally, digital photography workshops and exhibitions focused on environmental themes offer powerful platforms for education and advocacy. By training individuals to capture and share images of their environment, these initiatives empower communities to tell their own stories of ecological change and resilience. Exhibitions, whether online or in physical spaces, can bring these stories to a wider audience, creating a shared sense of responsibility and a collective call for action towards sustainability.

Digital photography is a dynamic and powerful tool in environmental activism. Its ability to document, inform, and inspire action is unmatched in the digital age, where visual content significantly influences public discourse. Through the lens of digital cameras, the beauty of our planet and the urgency of its protection are brought into sharp focus, challenging individuals and societies to act before it is too late. Participant projects that harness the immediacy and versatility of digital photography to address local environmental concerns demonstrate the potential of visual storytelling to not only bear witness to the challenges we face but also to pave the way for meaningful change.

Fundamental rules of photography

Photography, as an art and science, is governed by several fundamental rules that help photographers create visually compelling and balanced images. Understanding these rules can significantly enhance the effectiveness of photographs, especially in conveying environmental messages or advocating for change.

1. Rule of Thirds: Divide your image into nine equal segments with two vertical and two horizontal lines. Place key elements along these lines or at their intersections to create a balanced, engaging composition.

2. Leading Lines: Use natural or man-made lines within your shot to guide the viewer's eye towards the main subject, enhancing the photo's depth and perspective.

3. Lighting: Mastering the use of light is crucial: it shapes the mood, texture, and overall impact of your image. Natural light, especially during golden hours, provides warmth and dimension.

4. Framing: Utilise elements within your scene to frame the main subject, adding depth and focusing the viewer’s attention on the focal point.

5. Perspective: Changing your perspective or angle can dramatically alter the narrative of your photograph, offering fresh interpretations of familiar scenes.

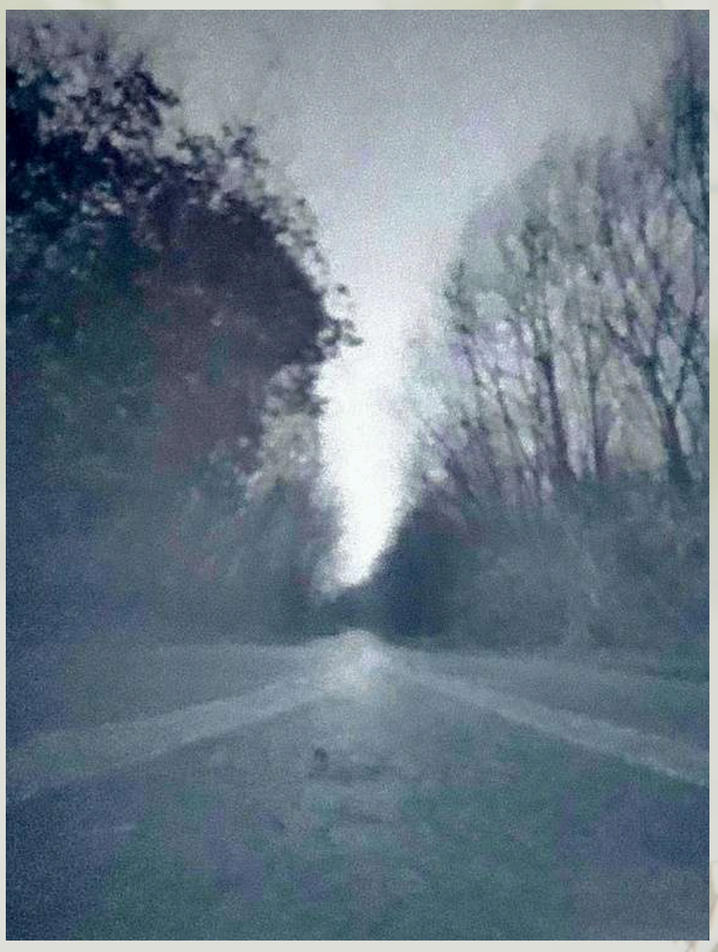
6. Simplicity and Minimalism: A clutter-free composition with a clear focal point communicates your message more powerfully. Less is often more effective in photography.

7. Depth of Field: Manipulating the depth of field or how much of the shot is in sharp focus, can highlight the subject while softening the background, drawing the viewer’s eye to the intended target.

8. Symmetry and Patterns: Natural and artificial scenes are rich with symmetry and patterns. Capturing these can add a striking visual element to your photographs, creating a sense of harmony and order.

Each of these rules serves as a guideline to enhance the aesthetic quality and communicative power of your photographs, especially useful in environmental photography where conveying a narrative is so important. Sometimes, breaking these rules could bring an interesting perspective, so experimentation is the key to success!

Funded by
the European Union



4.6. From Observation to Action in our project - Photography Workshops

Our photography workshops, focused on environmental themes, offered a structured creative platform for participants to engage deeply with their surroundings, fostering a sense of connection and responsibility towards the natural world. These workshops typically unfolded in several stages, beginning with an introduction to basic photography skills - covering composition, lighting, and camera settings - to ensure all participants, regardless of prior experience, can capture meaningful images.

Activities within these workshops were designed to encourage participants to explore their environment through the lens, prompting them to observe details often overlooked. Guided field trips to local natural sites were the next steps, where attendees documented their observations. These practical sessions provided context to the images captured and encouraged a reflective understanding of human impact on nature.

The engagement did not end with shooting photos because participants were also involved in post-processing sessions where they selected, edited, and prepared their work for presentation. Exhibitions, either online or in community spaces, will allow these young photographers to share their perspective on environmental issues with a wider audience, fostering a dialogue between the community, activists, and policymakers.

Such workshops empower young people by giving them a voice and a tool - photography - to express their concerns and advocate for change. They learn the principle of photography and also the science and ethics of environmentalism. By documenting their environment, they become more observant and appreciative of its beauty and its fragility. This dual focus on art and advocacy transforms participants from passive observers to active participants in the environmental movement, equipped with the skills and passion to make a difference. Through the power of visual storytelling, they can inspire action, influence change, and contribute to a collective effort towards a more sustainable future.

Funded by
the European Union

From Observation

... to Action in our project

4.7. Case Studies: Successful Environmental Campaigns Through Photography

Using the profound impact of visual storytelling, environmental campaigns have effectively used photography to highlight ecological issues, driving significant public and policy action. Two notable examples demonstrate the role photography plays in mobilising for environmental protection.

Case Study 1: "Save the Arctic" Campaign by Greenpeace (2012)

Launched in 2012, Greenpeace's "Save the Arctic" campaign utilised powerful imagery to spotlight the threats of climate change and oil exploration on the Arctic's pristine environments and its inhabitants. The campaign featured photographs of polar bears on diminishing ice floes, the serene yet vulnerable Arctic landscapes, and Greenpeace activists protesting against oil giants (https://media.greenpeace.org/archive/Polar-Bear-in-the-Arctic-27MZIFV8SSII.html). One of the campaign's notable achievements was gathering millions signatures for a petition demanding the Arctic be declared a global sanctuary, free from oil drilling and industrial fishing. The visual impact of the campaign's photography played a crucial role in drawing global attention to the Arctic's plight, influencing discussions on environmental policy and contributing to the establishment of protected areas in the Arctic Ocean.

Case Study 2: "The Living Forests" Campaign by WWF (2011)

Initiated by the World Wildlife Fund (WWF) in 2011, "The Living Forests" campaign aimed to raise awareness about the importance of forest conservation in Europe and beyond. Through compelling photographs depicting Europe's diverse forest landscapes and the wildlife they support, contrasted with images of deforestation and degradation, the campaign brought the critical role of forests to the forefront of public consciousness (https://wwfeu.awsassets.panda.org/downloads/living_forests_chapter_1.pdf).

One significant outcome was the bolstering of support for the EU's Forest Law Enforcement, Governance and Trade (FLEGT) action plan, which seeks to reduce illegal logging and improve the sustainability of forest management. The campaign's visually-driven narrative helped increase public and political support for forest conservation, contributing to legislative advances and greater protection for critical forest habitats across Europe (https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Wald/WWF-Living-Forests-Report-Chapter-5.pdf).

These case studies exemplify how photography, by capturing the beauty of nature and the urgency of environmental threats, can serve as a powerful catalyst for change. The "Save the Arctic" and "The Living Forests" campaigns, through their impactful imagery and strategic advocacy in the early 2010s, achieved significant milestones in environmental protection. By bringing distant environmental challenges into the public eye, these campaigns showed the power of visual storytelling in bridging the gap between awareness and action, marking substantial progress in the global movement towards a more sustainable and protected planet.

Taking photos in nature using a pinhole camera:

4.8. Crafting Impactful Environmental Narratives with Photography

Creating impactful environmental narratives through photography involves more than just taking pictures: it requires a deliberate approach to framing, composition, and storytelling. These elements combine to form powerful narratives that depict the beauty and fragility of our environment and also inspire action and change (https://www.theguardian.com/environment/gallery/2023/nov/27/environmental-photographer-of-the-year-2023-in-pictures).

Here are our guidelines and tips for crafting compelling photographic narratives focused on environmental messages.

1. Understand the message: Before you even lift your camera, it is important to have a clear understanding of the message you wish to convey. Whether you are highlighting the devastation of deforestation, the beauty of untouched landscapes, or the resilience of communities adapting to climate change, your message will guide every shot you take. Research your subject thoroughly to ensure your narrative is informed and accurate.

2. Framing and composition: Framing and composition are the foundations of a visually compelling narrative. For example, use the rule of thirds to place key elements in your frame, creating balance and directing the viewer's eye to the most important parts of your story. Consider the use of leading lines to guide the viewer through your image and the narrative journey. Pay attention to the background and edges of your frame to avoid distractions that might detract from your message.

3. Use of colour and light: Colour and light can dramatically affect the mood and impact of your photographs. Use them to your advantage to emphasise certain elements of your story. Warm tones can evoke feelings of nostalgia and loss, ideal for highlighting the impact of environmental degradation, while cool tones can create a sense of calm and serenity, often used to depict the beauty of natural water sources or lush landscapes. Natural lighting, especially during the golden hour, can add depth and texture to your images, enhancing the emotional connection with your audience.

4. Incorporate human elements: Including people in your environmental narratives can significantly increase their impact. Human elements provide a scale to environmental issues, making them more relatable. Photographs depicting individuals or communities interacting with their environment, positively or negatively, can strengthen the viewer's emotional engagement and drive home the urgency of the depicted environmental issue.

5. Tell a story through sequences: A single image can be powerful, but a series of photographs can tell a more comprehensive story. Consider creating a photo essay or series that documents an environmental issue or conservation effort over time. This approach allows you to explore the subject in depth, from the causes and effects to potential solutions, providing a fuller picture of the issue at hand.

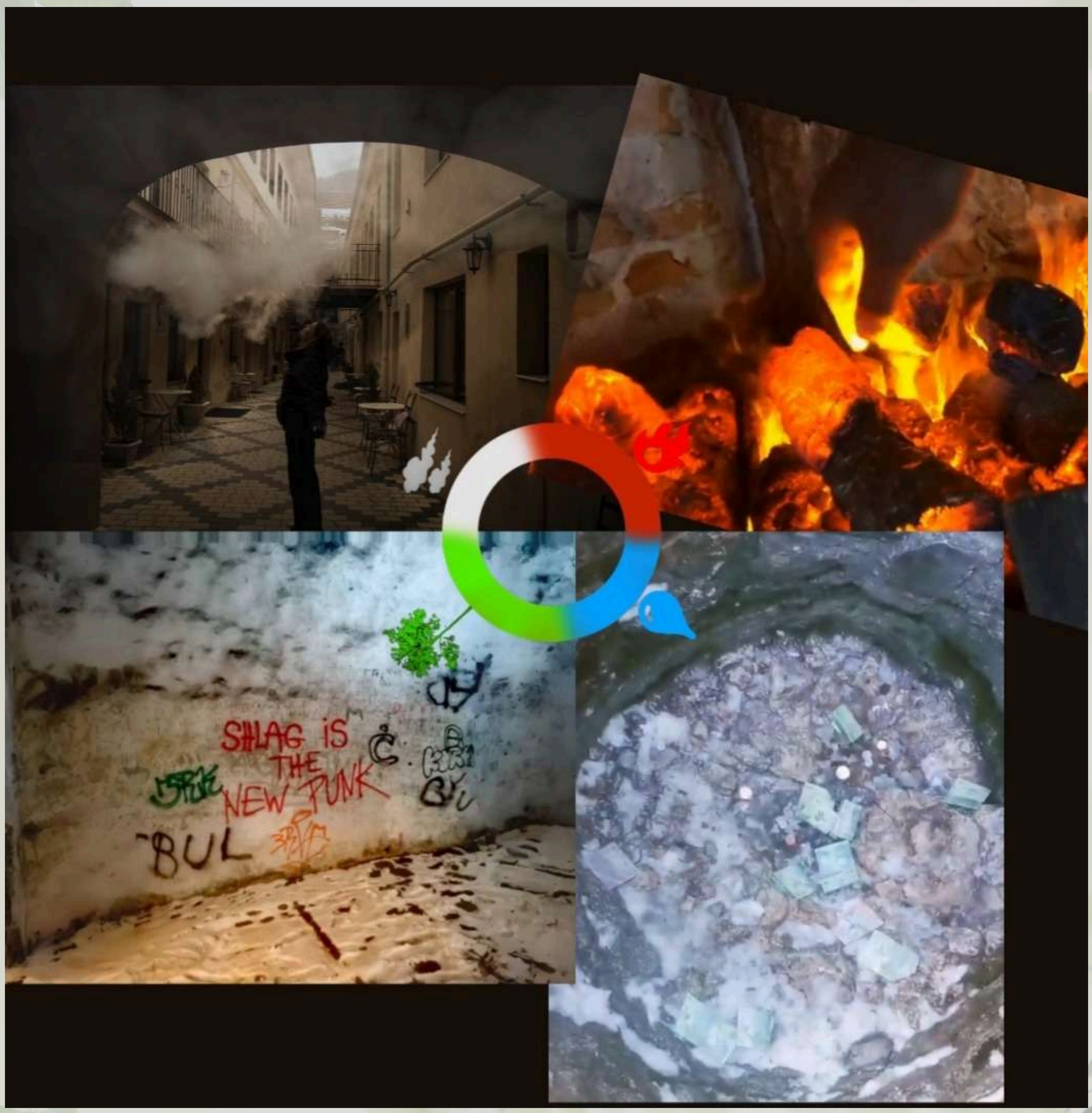
6. Caption with care: While it is said that a picture is worth a thousand words, a well-crafted caption can significantly enhance its message. Use captions to provide context, share statistics, or tell a story that the image alone might not convey. Captions are an opportunity to add depth to your narrative, making your photographs even more compelling and informative.

7. Engage with your audience: Consider how and where you share your photographs. Utilise social media, exhibitions, and publications to reach a wider audience. Engaging with your viewers through these platforms can foster dialogue, encourage feedback, and build a community around the environmental causes you are passionate about.

By following these guidelines and using the power of photography, you can create impactful narratives that highlight the environmental issues of our time and also inspire individuals and communities to take meaningful action towards a more sustainable and equitable world.

Funded by
the European Union

Environmental campaign from our Training Course



4.9. Green Business Ideas and Sustainability Through the Lens

Photography, with its ability to capture and convey messages, is very important in promoting green business initiatives and sustainability. By visualising the concepts of eco-friendliness and sustainable practices, photography can significantly enhance the communication strategies of businesses aiming to make a positive environmental impact. This powerful medium showcases a business's commitment to sustainability and also encourages consumers to support eco-conscious products and services.

Examples of how participants could use their skills to support or develop sustainable business ideas:

1. Highlighting sustainability efforts: Photography can document and showcase a company's sustainable practices, such as the use of renewable energy, waste reduction measures, or sustainable sourcing. High-quality images that depict these practices in action offer tangible proof of a company's environmental commitment, helping to build trust and credibility with consumers. For instance, a company that produces goods with recycled materials can use photography to illustrate the lifecycle of their products, from the collection of recyclable materials to the final eco-friendly product.

2. Storytelling for green brands: Green businesses often have compelling stories behind their products or missions. Photography can bring these narratives to life, connecting consumers with the brand's ethos on a deeper level. For example, a startup focused on clean energy solutions can use photography to tell the story of how its products are made, highlighting the innovative technology and the environmental benefits it brings. This visual storytelling not only informs but also engages and inspires the audience, fostering a stronger emotional connection to the brand and its values.

3. Promoting eco-tourism: Eco-tourism businesses can use photography to showcase the natural beauty of their destinations emphasising their commitment to conservation and local communities. Through images that highlight the uniqueness and fragility of these destinations, photographers can help ecotourism operators attract visitors who

value sustainability and are mindful of their travel impact. These visuals are a reminder of the importance of preserving natural environments for future generations.

4. Supporting sustainable business ideas: Participants in photography workshops focusing on environmental themes have found innovative ways to use their skills in support of sustainable business ideas. For example, a photographer with a passion for forest conservation might collaborate with a company that creates products from reclaimed forest plastic, providing striking images that highlight both the problem of forest waste and the beauty of repurposed materials. Another participant might work with local farmers or food cooperatives to create a visually appealing online presence that promotes the benefits of locally sourced, organic produce.

5. Visual advocacy for change: Beyond supporting specific businesses, photography is a type of visual advocacy, encouraging broader shifts towards sustainability in the business community and among consumers. Photographers can document the adverse effects of unsustainable practices, such as pollution or deforestation, and contrast these with images of sustainable solutions and green technologies. This type of visual advocacy raises awareness and push both businesses and consumers towards more sustainable choices.

Photography's role in supporting green business initiatives and promoting sustainability is very important and impactful. By visually documenting sustainable practices, telling the stories behind green businesses, and advocating for environmental responsibility, photographers can inspire a shift towards greater eco-consciousness in the business world and among the wider public. Through their lenses, photographers have the power to influence perceptions, encourage sustainable behaviours, and contribute to the development of a more sustainable and equitable future.

4.10. Conclusion

Reflecting on the potential of photography to continue influencing environmental activism

As we look towards the future, the journey of photography from a simple documentation tool to a powerful medium for social change conveys its potential to further drive the environmental movement. As global environmental challenges grow in complexity and urgency, photography's role in showing these issues, fostering empathy, and spurring action becomes more pronounced. The capacity of images to transcend linguistic and cultural barriers makes photography a universal language of environmental advocacy, capable of uniting diverse audiences on sustainability and suitable for a multicultural environment such an Erasmus+ project.

The evolving landscape of digital technology and social media amplifies the potential reach and impact of environmental photography. These platforms offer opportunities for photographers, whether amateur enthusiasts or professionals, to share their work, engage with a global audience, and inspire collective action towards environmental preservation.

Looking forward, the call to action is for ongoing engagement and creativity in using photography for environmental advocacy. The challenges facing our planet require innovative solutions and diverse perspectives. Photographers with their skill and ability to capture and communicate complex environmental narratives, by continuing to explore and experiment with new techniques, subjects, and storytelling approaches, can keep the environmental conversation fresh and forward-moving.

Encouraging creativity to promote sustainability

Encouraging a future where photography and environmental advocacy are increasingly intertwined invites a hopeful vision of change. Through the lens, each captured image bears witness to the state of our environment and also urge us towards a more sustainable world.

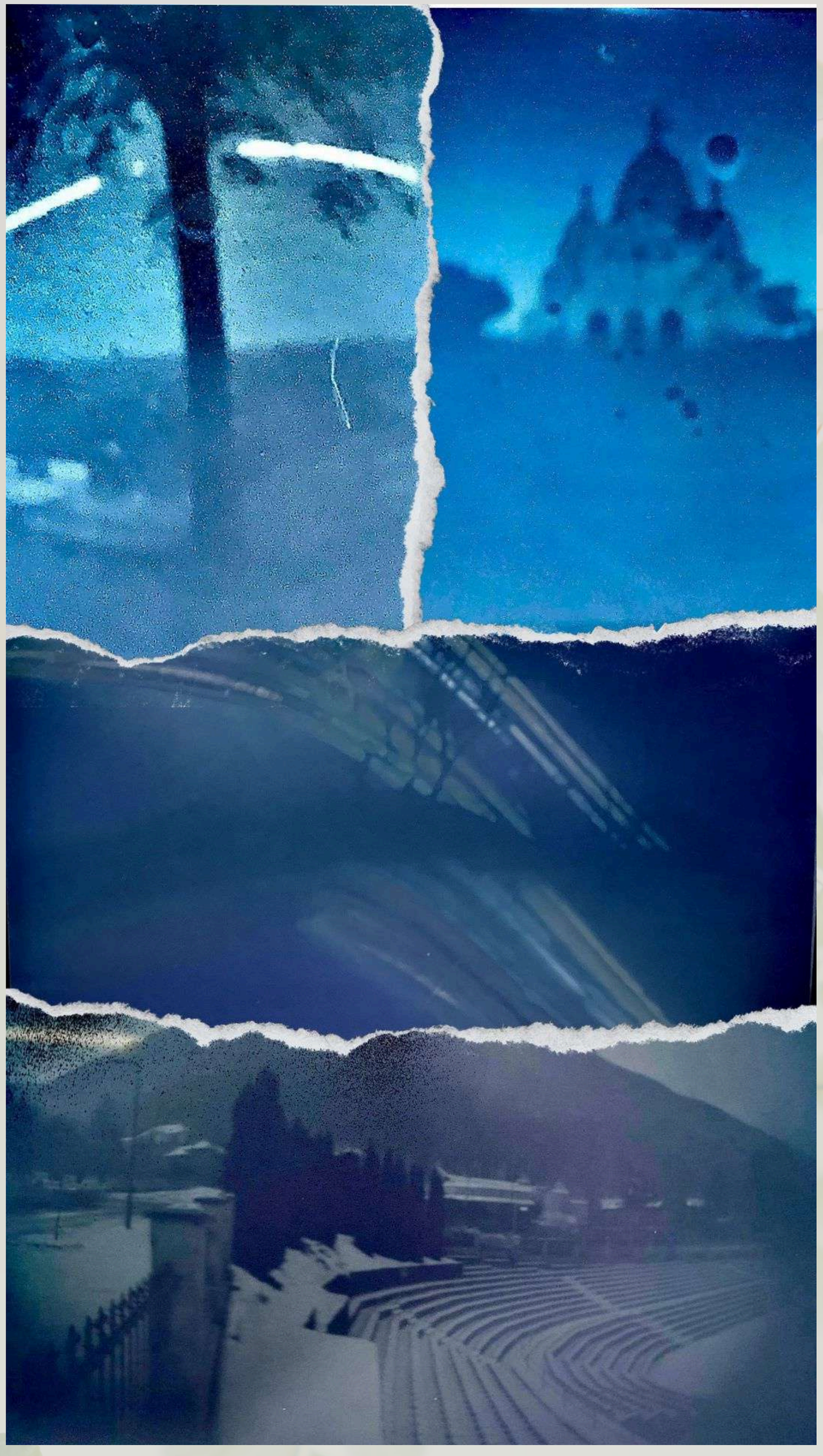
The Erasmus+ training course "Sustainable Living Through the Lens" has presented the intersection of photography and environmental sustainability, conveying the important role that visual storytelling plays in advocating for a healthier planet. Throughout this journey, participants increased their photographic skills and their understanding of environmental issues, learning to view the world through a lens of sustainability. This course has equipped a new generation of environmental youth workers with the tools to document, interpret, and share the beauty and fragility of our natural world, creating a sense of responsibility and urgency towards its preservation.

The convergence of photography and activism witnessed here reinforces the idea that creativity and awareness can indeed spark meaningful change, encouraging participants to continue exploring and advocating for sustainable practices in their communities and beyond. As we conclude this transformative experience, it is clear that "Sustainable Living Through the Lens" has been more than just a training course: it has been a call to action.

The knowledge and insights gained here are seeds for the future because the participants are ready to inspire and engage others in the fight against environmental degradation. The challenge is now to carry forward the lessons learned, ensuring that the lens through which we view the world always reflects our shared responsibility to safeguard it for generations to come.

The "Sustainable Living Through the Lens" experience conveys the power of education to inspire a domino effect of positive change. Participants are leaving with more than just memories because they carry a mission to use their acquired skills as a loudspeaker for environmental advocacy. They are the starting points of a cascade that promises to flow through their local communities and beyond, using the universal language of photography to connect hearts and minds in the pursuit of a sustainable world.

Collage with our pinhole photos:



Funded by
the European Union

Funded by
the European Union

Good memories and friends

‘Sustainable Living through the Lens’ Training Course

and

our story is just at the beginning….

REFERENCES:

- **for Chapter 1**

- Environment Situation and Legislation in Turkyie

https://www.tarimorman.gov.tr/DKMP

https://csb.gov.tr/sss/tabiat-parki-milli-parklar

https://education.nationalgeographic.org/resource/ecology/

https://planningtank.com/environment/importance-of-ecology

https://www.researchgate.net/publication/216236176_Turkey's_globally_important_biodiversity_in_crisis

- Environment Situation and Legislation in Romania

https://erasmus-plus.ec.europa.eu/ https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/small-scale-partnerships

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en https://cinea.ec.europa.eu/programmes/life_en

https://www.eea.europa.eu/en/datahub/datahubitem-view/6fc8ad2d-195d-40f4-bdec-576e7d1268e4 https://www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-10/romania

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640

https://www.mmediu.ro/

- **for Chapter 3**

https://www.tarimorman.gov.tr/DKMP Shrivastava, P. (1995). The Role of Corporations in Achieving Ecological Sustainability. Academy of Management Review, 20(4), 936-960. doi:10.5465/amr.1995.9508080337

Ban Ki-moon, former Secretary-General of the United Nations, in his foreword to the UNEP report "Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication" (2011)

https://csb.gov.tr/sss/tabiat-parki-milli-parklar

https://dergipark.org.tr/tr/download/article-file/71865
Esty, D. C., & Winston, A. S. (2006). Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage. Yale University Press
https://green-business.ec.europa.eu/index_en
https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy
https://corporate.enelx.com/en/question-and-answers/what-is-green-economy
https://www.tesla.com/ https://www.patagonia.com/actionworks/home/choose-location/?utm_source=patagonia.com&utm_campaign=header_tabs&utm_medium=referral
https://www.decentjobsforyouth.org/theme/green-jobs-for-youth#WHY
https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_732596.pdf
https://www.undp.org/publications/green-jobs-women-and-youth-what-can-local-governments-do https://cpdonline.co.uk/knowledge-base/business/green-jobs/
https://beebuilt.com/pages/beekeeping-for-beginners
https://www.wildabundance.net/blog/basics-of-foraging-and-wildcrafting/
https://nourishproject.ca/8-things-know-about-community-gardens
https://www.lowimpact.org/categories/mushroom-cultivation

- **for Chapter 4**

https://www.photographyoffice.com/blog/2013/12/masters-of-photography-sebastiao-salgado-genesis-the-legacy-of-planet-earth https://www.houkgallery.com/artists/31-nick-brandt/ https://www.nickbrandt.com/essays/essays:-this-empty-world/this-empty-world-concept/ https://www.yannarthusbertrandphoto.com/categorie-produit/from-above/ https://www.anseladams.com/ansel-adams-the-role-of-the-artist-in-the-environmental-movement/ https://www.shutterbug.com/content/remembering-sir-simon-marsden-master-infrared-photography
https://www.mcgill.ca/newsroom/channels/news/earth-above-9794
https://media.greenpeace.org/archive/Polar-Bear-in-the-Arctic-27MZIFV8SSII.html
https://wwfeu.awsassets.panda.org/downloads/living_forests_chapter_1.pdf
https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Wald/WWF-Living-Forests-Report-Chapter-5.pdf

https://www.adobe.com/creativecloud/photography/discover/photo-composition.html
https://photographypro.com/composition/
https://www.ilfordphoto.com/pinholephotography/store=ilford_brochure&___from_store=ilford_uk
https://www.alternativeprocesses.org/pinhole-photography-day
https://core.ac.uk/download/pdf/42584447.pdf
https://www.theguardian.com/environment/gallery/2023/nov/27/environmental-photographer-of-the-year-2023-in-pictures
https://forestnation.com/blog/how-to-use-your-photography-to-support-and-advance-conservation-and-sustainability-efforts/
https://www.theguardian.com/environment/2021/nov/29/greenpeace-half-a-century-on-the-frontline-of-environmental-photo-activism
https://www.skyatnightmagazine.com/advice/skills/how-to-make-a-pinhole-camera
https://conservationvisuals.com/conservation/why-photography-is-important/
https://www.display.net.nz/post/capturing-sustainability-how-photography-drives-positive-change-in-business
https://fastercapital.com/content/Photography-environmental-awareness--Capturing-Sustainability--How-Eco-Photography-Can-Boost-Your-Brand.html