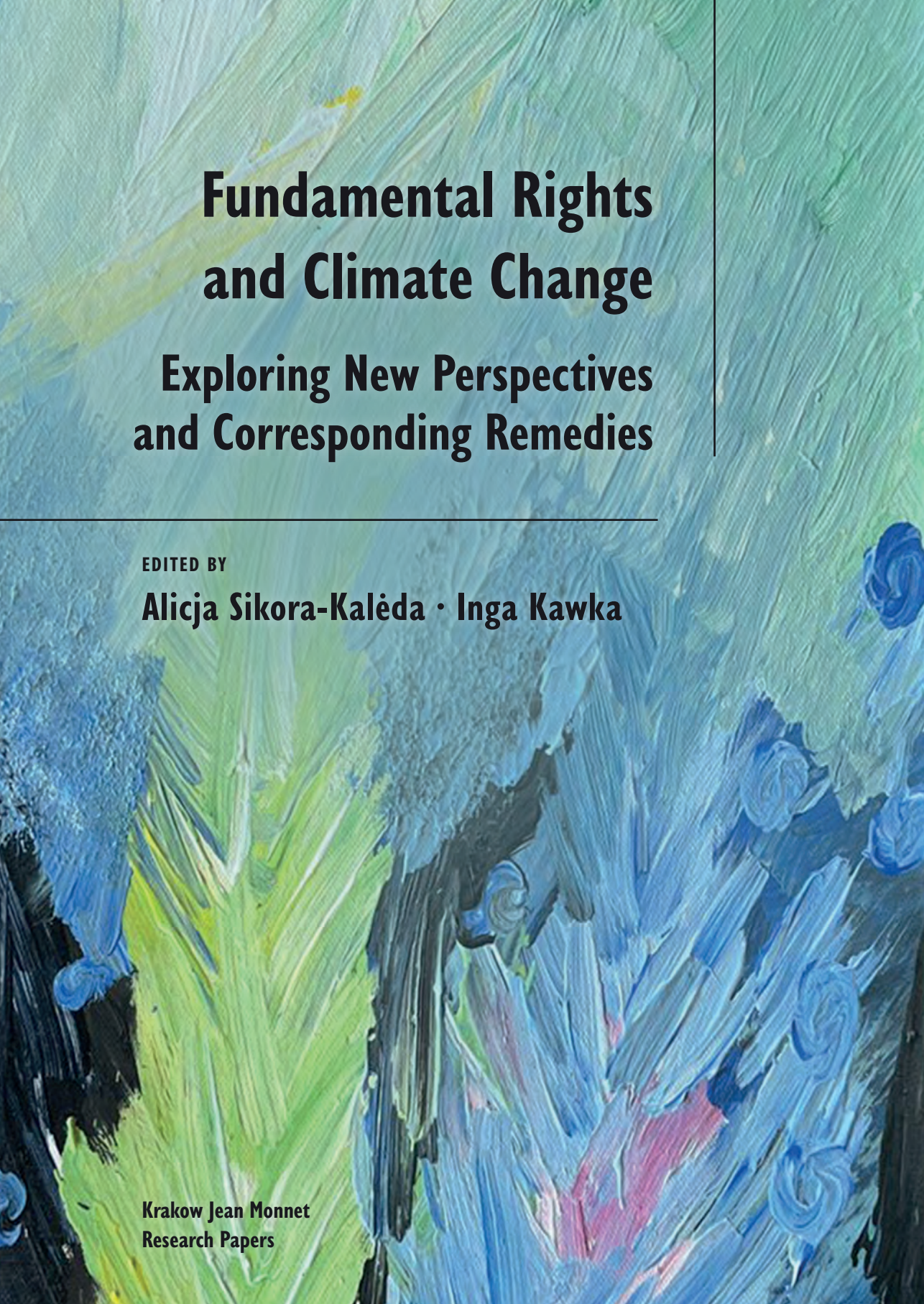

Fundamental Rights and Climate Change

Exploring New Perspectives and Corresponding Remedies

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Alicja Sikora-Kalėda · Inga Kawka

Krakow Jean Monnet
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Table of Contents

Introduction

The environment is where we all meet;
where we all have a mutual interest;
it is the one thing all of us share.

Lady Bird Johnson

The monograph outlines the growing importance of fundamental rights in the European Union, particularly in the context of environmental protection and the fight against climate change. These rights have become a cornerstone in shaping policies that address ecological challenges while balancing economic and social aspects. The European Green Deal (EUGD), a landmark initiative, embodies the EU's commitment to transitioning into a climate-neutral, modern economy by 2050. This ambitious goal requires comprehensive legislative action and coherence in implementing policies across various sectors, ensuring that all measures align with and uphold fundamental rights as enshrined in the EU legal framework.

This monograph is the culmination of scholarly work inspired by discussions from the conference titled 'Fundamental Rights and Climate Change in EU Law and Beyond – Mapping Fundamental Rights, Nature's Rights, and Corresponding Legal Remedies,' organized in September 2023 as part of the Jean Monnet Module project, 'Sustainability and Climate Change in EU Law.' This academic event, hosted by the Chair of European Law at the Jagiellonian University, brought together experts from diverse fields to discuss and exchange perspectives on sustainability and the legal frameworks within the EU. The insights shared during the conference laid the foundation for the analyses presented in this book, highlighting the complex interplay between fundamental rights, environmental challenges, and legislative coherence.

The chapters of this book reflect a collective scholarly effort to explore diverse aspects of fundamental rights and their intersections with environmental law within the EU framework. The opening chapter, authored by Alicja Sikora-Kalėda investigates the limits of human rights as instruments to advocate for global climate action. It examines how climate litigation impacts human rights and evaluates the potential evolution of environmental rights in EU law. Ilona Przybojewska contributes with an analysis of how poor environmental conditions can lead to state liability, referencing a notable 2021 Polish Supreme Court resolution. Her work probes the extent to which environmental issues can be recognized as affecting personal rights and the broader implications of this recognition.

This monograph aims to serve as a comprehensive resource for legal practitioners, scholars, and policymakers, encouraging further dialogue on the integration of environmental and human rights within the EU legal system.

Alicja Sikora-Kalėda
Inga Kawka

Fundamental Rights and Climate Change – Exploring New Perspectives and Corresponding Remedies
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Elżbieta Szczygieł[1] Paulina Szyja[2]
Katarzyna Kowalska[3] Renata Śliwa[4]

Development of Green Skills as an Educational Platform

Abstract

Background: A perception of the possible impact of green skills development on society is presented. How have legislative and political processes of the EU been established in recent years to increase the importance and consciousness of individual participation in pro-ecological behaviours and given rise to the establishment of green skills to foster the care of the natural environment?

Aim: The presentation will focus on the development of green skills as an educational platform to explore possible efforts to complement policy and/or regulatory adjustments.

Method: The contributory character of the chapter is based on the three-fold axis of the analysis, encompassing political, legal perspective, and researching green skills as an effective platform to develop the cognitive perceptions of the solutions being recognised. The analysis is embedded in the review of the legal and political endeavours of the European Commission to grab the benefits of green transformation in the economic and political interest of all EU citizens, as well as on the perspective of the green skills development as an educational platform toward green transition.

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Research summary: The mix of legal, political or organisational as well as individual actions has the potential to stimulate activities that empower whole communities towards sustainable individual, public and corporate behaviour.

Keywords: green transformation, green skills, EU policy in green skills development

Introduction

Social sensitivity, the mobilisation of ideas on sustainable practices, cost management, resource allocation and capacity adaptation, integration of a wide range of stakeholders, empowerment of individuals and communities, operating in a long-term sustainable perspective are the main objectives of the EU-driven interpretation of the priorities of resilience and stability of an economy and societies.

The area of skills formation and use is of particular value in the process of capacity building, transformation of management operations, empowerment, activation of sustainable alternatives and innovative solutions to act more circularly, climate neutral, resource efficient, etc. Adaptability to local contexts, small-scale experimentation and low-cost solutions that stimulate innovation while meeting societal expectations are the hallmarks of stimulating educational and business models, often geared towards self-sustainability, collective efforts of teams faced with the limitations of existing solutions to mitigate economic and social slowdowns, reduce distortions in income distribution, increase the use of business strategies to address social and environmental problems while generating revenue.

The imperative to strive for an accurate transition to a greener world imposes obligations to stimulate politically, enforce legally (if necessary) and harvest economically to make societies sustainably better off. The key issue that emerges is the need for people to develop new skills and update existing ones to support the green transition. The green skills are crucial to sustain the politically driven movement of stimulating pro-ecological behaviours and choices, to push (if necessary) for the rules to be legally enforced, and essentially to adapt the skills within occupations to strengthen the economic sustainability of societies.

Many processes and phenomena that are considered to be socially or ecologically neutral and represent everyday attitudes have a long-term and significant impact. As well as reducing the burden on the natural environment, everyday attitudes have many economic benefits (cost savings, positive corporate image). Raising the environmental awareness of the entire community is essential to eliminating environmental threats. It is also extremely important to mobilise resources and use them

in an effective and planned manner to prevent further environmental degradation. It remains an open question who will be the leader, whether it will be a more centralised or decentralised formula, whether it will be more top-down or bottom-up stimulation, and what the priority will be for the time being. If we assume that the most important thing at the moment is to work on the awareness of the population, then the educational perspective of the problem should be the issue. Going further in this direction, the stimulation of educational initiatives aimed at developing educational platforms is of fundamental importance.

The structure of the chapter follows the sequence of presentation of green skills, EU involvement in the green skills development process and individual project outlines dealing with green skills development in higher education.

1. Green skills as an educational platform to adjust toward green transformation

In the EU Council Recommendation of 22 May 2018 on key competences for lifelong learning, it is pointed out that to maintain current levels of well-being and to secure future high levels of employment and cohesion, people need to acquire a mix of skills and competences.[5]

The impetus of lifelong learning is to serve the processes of adaptation, to upgrade qualifications, to orient competences and skills to the real needs of the labour market, to take advantage of today's and tomorrow's market opportunities.

The information society is creating new professions. The growing information and audiovisual sector is absorbing new workers whose professions and skills must be adapted to meet changing needs. A large-scale service sector, including information services, is being developed in information societies. The development of information networks, including the Internet, is creating ever new areas of services for an increasing number of users.

The above-mentioned implications of globalisation processes impose new tasks on governments. The ever-increasing saturation of the economy with capital and the increase in its productivity, based on technological progress, inevitably lead to a decrease in the demand for labour. On the other hand, environmental challenges – climate change, rising and uncertain energy prices and the prospect of depleting resources – are increasing.

[5] Council of the European Union, *Council Recommendation of 22 May 2018 on Key Competences for Lifelong Learning*, "Official Journal of the European Union" 2018, C 189/01.

The above realities and the forecasted future changes, pose new challenges and impose requirements on market actors, and thus on the broader education system, which has the task of „equipping" the managers of organisations and the people working in them with the necessary competences and skills, which are in practice a key success factor in the process of competition and development.

Recognising this, all developed countries, in their programmes and strategies to counter social and environmental problems, are trying to respond to these processes by investing in the formation in formal and informal processes – technological skills and green skills – related to the concept of sustainable development.

Education, especially today, should have an important function in preparing people to function in organisations subjected to new dynamic changes and competitive perspectives. These conditions are largely related to technological progress and concern, above all, the risks associated with the limitations and degradation of the natural environment. In order to cope with these realities, the education system has to respond to challenges not only in economic but also in social and ecological terms. This is because the issue of the impact of businesses and households on the state and quality of the environment and related social issues (e.g. the state of health of the local community associated with smog) is becoming increasingly important. There is also an increasingly broader interpretation of the concept of risk in the operation of market actors, pointing to the need to mitigate it in environmental, social and thus reputational terms.

From the point of view of the labour market, the green transformation, implemented within the framework of the implemented circular economy (which is a response to environmental problems), affects both the overall number of jobs in the economy and changes in demand for green professions. According to the experts of the Lewiatan Confederation, by 2030, the energy transition is expected to lead to the creation of approximately 300,000 new jobs in Poland in sectors such as renewable energy, nuclear energy or electromobility.[6]

The changes resulting from the implementation of the energy transition are associated, among other things, with changes in the demand for workers, including:[7]

- the energy sector based on traditional energy sources,
- the offshore/onshore/wind farm sector,
- the photovoltaic industry,

[6] Konfederacja Lewiatan, *Raport Lewiatana. Zielone miejsca pracy zwiększą konkurencyjność gospodarki*, 2022, https://lewiatan.org/raport-lewiatana-zielone-miejsca-pracy-zwieksza-konkurencyjnosc-gospodarki/ (20.09.2024).

[7] Instytut Analiz Rynku Pracy, *Zmiany na rynku pracy wynikające z wdrażania koncepcji zrównoważonego rozwoju. Raport tematyczny*, Warszawa 2022.

– the coal mining sector,
– production, servicing and repair of personal transport vehicles.

Meanwhile, there is a shortage of green skills on the Polish labour market, which poses a serious challenge for both the lifelong learning system and businesses.[8] With insufficient training in the school education system in the area of green professions and skills, it is necessary to develop these competences within formal education, but also to support it through targeted courses and training.

Eliminating the skills deficit in this area should be considered a key aspect of systemic preparedness for the calls related to adaptation to the labour market and climate change.

Experts point out that education is faced with the requirement to take a more holistic view of the causes and effects of the processes taking place, as well as the need to develop the skills to design and implement innovative solutions where ecological issues are the point of reference. Environmental education should be an important platform relating to different areas of human activity. Environmental problems and risks should occupy a special place in education at every stage, from pre-school education to university and post-graduate education.

Innovation of an economic nature should be seen as a fundamental solution to environmental problems, but also as a potential for making profits and improving wider social well-being.

Experts and practitioners emphasise that in the process of green skills education, both soft skills are important, e.g. understanding the greening of supply chains, the importance of environmental awareness and activities to raise awareness, as well as hard skills, e.g. the ability to assemble green solutions and circular facility design skills. Important for these skills are concrete design decisions, for example choosing a specific design or material for a product to counteract environmental degradation and increase efficiency. Awareness of the consequences of decisions and the ability to assess its wider benefits and costs in the short and long term is crucial.

Formal education in green skills should be complemented not only by training and courses, but also by internships and apprenticeships that students can profile for green skills acquisition.

The International Labour Organisation has developed a set of key skills, not linked to a specific job, but pointing to green skills as being increasingly universal and necessary in the labour market, these include:[9]

[8] *Ibidem*.
[9] *Ibidem*, pp. 36-38.

- awareness and respect for the environment; willingness to learn about sustainable development;
- adaptability to enable employees to acquire the theoretical and practical knowledge of new technologies and processes needed to green their workplace;
- ability to work as a team towards solutions that reduce the environmental footprint of the organisation;
- entrepreneurship, for exploiting the opportunities of low-carbon technologies to adapt and reduce environmental impact;
- skills to innovate, identify opportunities and create new strategies to respond to green challenges;
- marketing skills to promote greener products and services;
- strategic and leadership skills, to create an enabling organisational culture for green production and transport.

Education is therefore key to solving different types of problems, including environmental problems. Properly shaped green skills in the process of formal education (implemented in various profiles and faculties), is the possibility of shaping social attitudes adequate to the needs of the current and future labour market and socio-economic processes, and thus preparing for the proper identification of market opportunities (including green challenges) and their exploitation through the search for and application of, for example, the right business concept.

Green skills education should be based on a strong theoretical basis (knowledge of concepts and processes), but also on a strongly example-oriented education that teaches how to evaluate different innovation projects, how to look for environmentally and economically friendly solutions and how to shape students' inclination to think and act in a green project perspective.

Skills development is very important for socio-economic development and therefore the involvement of the EU in the support processes for the implementation of financial support programmes for green skills is of utmost importance. These issues are addressed in the following sections, both at EU level and from the perspective of an individual project.

2. Existing EU policy in green skills development

According to Articles 165 and 166 of the Treaty on the Functioning of the European Union, education remains the exclusive competence of the Member States. The Treaty grants the EU only soft competences in these areas, focusing mainly on coor-

dinating, complementing and supporting the actions of the Member States. The European Parliament and the Council of the European Union (Education Ministers) adopt incentive measures, excluding any harmonisation of the laws and regulations of the Member States, in order to achieve the main objective, i.e. the development of quality education.[10]

The basis for the issue of green skills development in the European Union should be sought primarily in the document entitled: "A European Economic Recovery Plan", in which the strategic objectives were identified, among them included: "Speed up the shift towards a low carbon economy. This will leave Europe well placed to apply its strategy for limiting climate change and promoting energy security: a strategy which will encourage new technologies, create new 'green-collar' jobs and open up new opportunities in fast growing world markets, will keep energy bills for citizens and businesses in check, and will reduce Europe's dependence on foreign energy."[11] Therefore, as has been emphasised, the issue of developing green jobs should be identified with the transition to a low-carbon economy and what it entails, i.e. changes in the operational processes of production and service provision to reduce emissions of heat-trapping gases, increase energy efficiency and increase the use of renewable energy. The colloquial term "green collar" should be clarified. The name is metaphoric to other terms that refer to jobs involving office work (white-collar jobs) and manual labour (blue-collar jobs), which originated in writing in the United States of America.[12] The correct term is "green jobs", defined by the International Labour Organisation[13] as follows: "Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency. Green jobs help:

- Improve energy and raw materials efficiency
- Limit greenhouse gas emissions
- Minimize waste and pollution
- Protect and restore ecosystems
- Support adaptation to the effects of climate change".

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[10] Consolidated version of the T*reaty on the Functioning of the European Union – Part three: Union Policies and Internal Actions – Title XII: Education, Vocational Training, Youth and Sport – Article 165* (ex Article 149 TEC), Official Journal 115, 09/05/2008 P. 0120 – 0121.

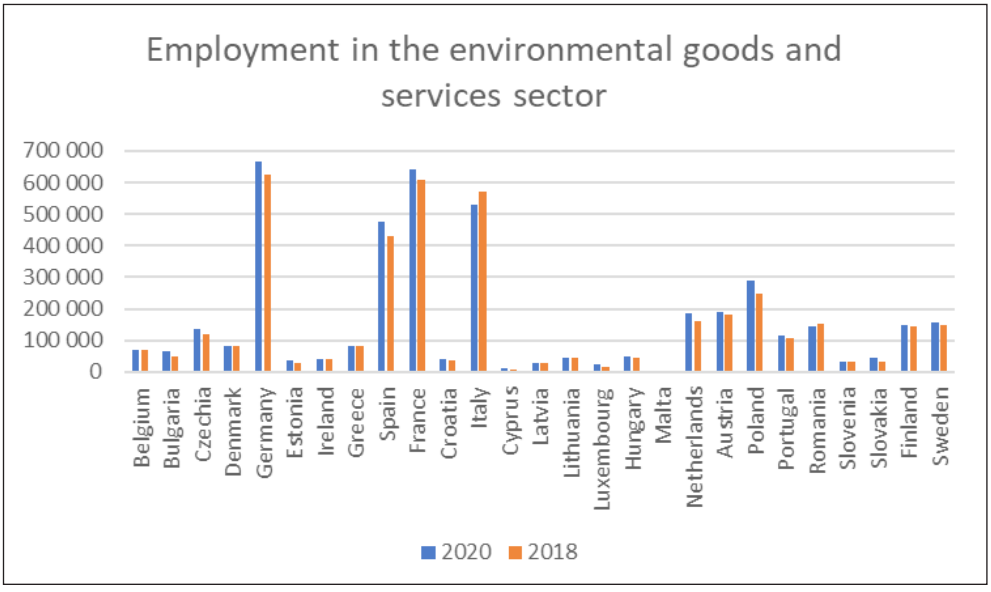
[11] European Commission, *A European Economic Recovery Plan*, Brussels 2008, p. 4, https://ec.europa.eu/economy_finance/publications/pages/publication13504_en.pdf (18.01.2024).

[12] R. Howells, *Why Do We Classify Jobs by Collar Color? Is Your Collar Blue, White, or Pink?*, "Medium" 2008, https://icemaverick88.medium.com/why-do-we-classify-jobs-by-collar-color-895dfab122d1 (18.01.2024).

[13] International Labour Organization, *What Is a Green Job?*, https://www.ilo.org/global/topics/green-jobs/news/WCMS220248/lang--en/index.htm (19.01.2024).

Considering the European Union, it should be noted that there is no single, binding definition of green jobs. In this regard, reference was made to definitions of others, inter alia ILO. And in the study "Public Employment Services and Green Jobs. Analytical paper", prepared by the Commission's Directorate-General for Employment, Social Affairs and Inclusion,[14] where highlighted: "green jobs associated with environmentally friendly industries, including renewable energy, eco-construction and waste management."[15] Simultaneously, the Eurostat identified green jobs with jobs in environmental economy, which is statistically defined as the environmental goods and services sector (EGSS),[16] including sixteen categories and various subcategories, inter alia: protection of ambient air and climate; waste management; wastewater management; management of energy resources.[17] The figure 1 presents data of employment in the environmental sector goods and services in European Union Member States in two years – 2018 and 2020.

Figure 1. Employment in the environmental sector goods and services in European Union Member States in two years – 2018 and 2020



Source: based on Eurostat, *Employment in the Environmental Goods and Services Sector*, https://ec.europa.eu/eurostat/databrowser/view/envacegss1/default/table?lang=en (19.01.2024).

[14] A. Cox, B. Foley, *Public Employment Services and Green Jobs*, Brussels 2013.

[15] *Ibidem*, p. 2.

[16] Eurostat, *Environmental Economy – Statistics by Member State*, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Environmental_economy_%E2%80%93_statistics_by_Member_State (19.01.2024).

[17] Eurostat, *Environmental Goods and Services Sector*, https://ec.europa.eu/eurostat/cache/metadata/en/envegsesms.htm (19.01.2024).

The number of full-time equivalent employees in the environmental goods and services sector in the European Union in 2018 was 4 608 000 and in 2020, was 5 065 000. The highest employment rate in this sector was recorded in Germany, France, Italy and Spain.

According to Barbara Kryk: "Regardless of the nature of the definitions, their analysis shows that there are 3 categories of green jobs:

- directly related to environmental protection;
- indirectly related to environmental protection;
- determined by changes in consumer income and expenditure.

Within each of these categories, it is possible to list economic sectors that have long been "'green' and those that are just 'greening' or emerging (modern). A distinctive feature of green jobs is that they encompass a wide range of workers needed, as green collar workers are also workers in green sectors."[18]

Follow EU documents in historical perspective, the issue of green jobs was also highlighted in the "Europe 2020. A European strategy for smart, sustainable and inclusive growth" in the context of achieving "sustainable future", as José Manuel Barroso emphasized.[19] This document presented, among the flagship initiatives, the one entitled "An Agenda for New Skills and Jobs", aimed at maintaining existing jobs and creating new ones. In the former respect, they can be related inter alia with "re-skilling of blue collar workers with a view to a transition towards green-collar jobs", and in the second "significant investments in "green" skills need to be made to ensure Europe lives up to its ambition of having 3 million green collar workers by 2020."[20] On the need to develop the job of a new sustainable economy stated also the European Parliament in resolution[21] and the Employment Committee in the dedicated report.[22]

In "the European Green Deal" it was highlighted that: "The transition is an opportunity to expand sustainable and job-intensive economic activity. There is significant

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18 B. Kryk, *Czas na zielone kołnierzyki*, "Ekonomia i Środowisko" 2014, vol. 3, no. 50, p. 13.

19 European Commission, *Europe 2020: A European Strategy for Smart, Sustainable and Inclusive Growth*, Brussels 2010, https://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf (19.01.2024).

20 European Commission, *An Agenda for New Skills and Jobs: A European Contribution towards Full Employment*, Strasbourg 2010, p. 9.

21 European Parliament, *European Parliament Resolution of 7 September 2010 on Developing the Job Potential of a New Sustainable Economy*, https://www.europarl.europa.eu/doceo/document/TA-7-2010-0299_EN.pdf (19.01.2024).

22 Council of the European Union, *Towards a Greener Labour Market – The Employment Dimension Of Tackling Environmental Challenges – EMCO Final Report*, Brussels 2010, https://data.consilium.europa.eu/doc/document/ST-16514-2010-ADD-1/en/pdf (19.01.2024).

potential in global markets for low-emission technologies, sustainable products and services. Likewise, the circular economy offers great potential for new activities and jobs."[23] In 2020 the European Commission presented "European Skills Agenda for sustainable competitiveness, social fairness and resilience", among the 12 actions listed were: Skills to support the green and digital transitions.[24] Regarding the green transition was stated: "The Commission will support the acquisition of skills for the green transition by:

- Defining a taxonomy of skills for the green transition, which will allow the statistical monitoring of the greening of our professions.
- Agreeing with Member States a set of indicators to allow monitoring and statistical analysis of developments in green skills.
- Developing a European competence framework on education for climate change, environmental issues, clean energy transition and sustainable development, which will spell out the different levels of green competence.
- Supporting the development of a core green skills set for the labour market to guide training across the economy with a view to creating a generation of climate, environment and health conscious professionals and green economic operators.
- Helping to integrate environmental and climate considerations into school, higher education, vocational education and training, as well as professional training."[25]

On 10 November 2020 The Pact for Skills was launched: "aims to support public and private organisations with maximising the impact of their investment in upskilling and reskilling, so they can thrive through the green and digital transitions."[26]

The Pact for Skills aims to use the European Social Fund+ to help train five million people for green jobs and a green recovery. It encourages stakeholders, local authorities and communities to use the Fair Transition Fund to support the retraining and employment of job seekers in regions affected by the transition to a low carbon economy.

From the overview of the documents, it is reasonable to conclude that there is a strong interest and commitment on the part of the EU institutions to promote and

[23] European Commission, *The European Green Deal*, Brussels 2019, p.7.

[24] European Commission, *Commission Presents European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience*, 1 July 2020, https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=9723&furtherNews=yes#navItem-1 19.01.2024).

[25] *Ibidem*.

[26] European Commission, *About the Pact for Skills*, https://pact-for-skills.ec.europa.eu/about (19.01.2024).

develop green skills in the context of maintaining and creating new jobs, not only to recover from the crisis but also to meet the challenges of the green transition.

In addition, the development of green skills is supported by the EU through the Erasmus+ programme, which provides opportunities to develop forward-looking skills and partnership projects.

3. Developing green skills

As part of the SDGLabs project,[27] research was carried out into the ownership and green skills development opportunities for potential and existing employees and co-operators of social economy actors. This research was carried out among the three target groups of the project: representatives of social economy organisations, university teachers and social economy students.

The survey was conducted in the first half of 2022 among the listed target groups from the four project partner countries: Belgium, Czech Republic, Greece and Poland. In total, the survey covered: 81 social economy organisations, 33 academics teaching social economy related courses and 141 students on these courses. A diagnostic survey method was applied, using two research tools: a survey questionnaire and an in-depth interview questionnaire. The latter tool was used in the study of social economy organisations. The main aim of the research was a comprehensive and transnational research to verify what green skills social economy actors possess and develop in order to realise an inclusive green transformation.

Common to all three questionnaires were questions about knowledge and understanding of green skills, where to get information about them and the extent to which they are acquired through different activities. Of particular note was the question about the specific areas of such skills that could be acquired.

Familiarity with the term 'green skills' itself varied between respondents (Table 1).

[27] SDG LABS – *Harnessing the Potential of the Social Economy towards a Green Transformation through the Establishment of Socially Driven Green Labs within Universities*; Project number: 2021-1-PL01-KA220-HED-000032077; Budget: 361 221 EUR; Duration: 01.11.2021-01.05.2024; Info: https://sdglabs.uom.edu.gr/; consortium: University of the National Education Commission, Krakow (Poland, Kraków), Stimmuli For Social Change (Greece, Thessaloniki), Prague University of Economics and Business (Czech Republic, Praha), University of Macedonia (Greece, Thessaloniki), The Square Dot team (Belgium, Leuven), Association for Social Cooperatives (Poland, Poznań); the project components: IO 1. Green skills in the field of Social Economy – Research Study, IO 2. Socially Driven Green Labs Digital Gallery, IO 3. Socially Driven Green Labs capacity building programme, IO 4. Socially Driven Green business simulation model, IO 5. Socially Driven Green labs students' upskilling programme.

Table 1. Distribution of responses to the question on knowledge of the term "green skills" (in %)

Answer	SEE	HE Teachers	Students
Yes	65.4	48.5	34.1
No	23.5	39.4	40.4
Don't know	11.1	12.1	25.5

Source: own elaboration based on the research.

Analysis of the results using the Chi2 test showed a statistically significant difference (p=0.00019) between the reported level of knowledge of this concept.

The highest level of familiarity with the term "green skills" was reported by employees and people working in social economy organisations, which may indicate the practical dimension of the skills themselves acquired through practice.

The declaration of familiarity involved indicating what is specifically understood as a set of 'green skills'. In this question, respondents were given 6 categories to choose from: *1 – transition to low-carbon economy; 2 – transition to circular economy (closed loop economy); 3 – tackling climate change; 4 – new environmentally friendly economic sectors; 5 – green products/services; 6 – knowledge, capacities, values and attitudes needed to develop and support a society that reduces the environmental impact of human activities*.

The highest number of responses from social economy actors was in the last category, as well as from academics and students. They indicated "knowledge, capacities, values and attitudes needed to develop and support a society that reduces the environmental impact of human activities" as the definition of green skills to the highest degree (Table 2).

Table 2. Defining "green skills" by groups of respondents (in %)

Green skills	SEE	HE Teachers	Students
transition to low-carbon economy	29.6	27.3	27.0
transition to circular economy	32.1	33.3	17.0
tackling climate change	34.6	33.3	36.2
new environmentally friendly economic sectors	29.6	18.2	31.2
green products/services	29.6	18.2	31.2
knowledge, capacities, values and attitudes	65.4	81.8	69.5

Source: own elaboration based on the research.

However, an interesting relationship was observed when the level of knowledge reported by respondents was taken into account. Those who reported knowledge of the term "green skills" were the most likely to say that these were elements of transformation (to low-carbon economy and to circular economy). Both were chosen by more than 60% of those familiar with the term. Those who explicitly stated that they were not familiar with the term 'green skills' were most likely to say that it was "tackling climate change" and "knowledge, capacities, values and attitudes" (more than 33% each, respectively). In this case, a cautious approach to providing definitions can be observed, as well as a rather low degree of variation in the answers. In the case of respondents declaring a lack of orientation in terms of their knowledge of "green skills", the response "green products/services" as a synonym for "green skills" was given the highest degree of indication (24.3%).

Table 3. Defining "green skills" by declaration of knowledge of the concept (in %)

Green skills	Yes	No	Don't know
transition to low-carbon economy	62.0%	25.4%	12.7%
transition to circular economy	63.9%	26.2%	9.8%
tackling climate change	47.8%	33.3%	18.9%
new environmentally friendly economic sectors	51.4%	29.7%	18.9%
green products/services	47.3%	28.4%	24.3%
knowledge, capacities, values and attitudes	47.2%	33.1%	19.7%

Source: own elaboration based on the research.

Surveyed Students and HE Teachers responded that green skills are most needed in the production area of companies. To a slightly lesser extent, in transport and storage. The responses of the two groups were consistent and no significant differences were found between them (Table 4).

Table 4. Areas in which green skills are useful in organisations (responses from academic staff and students; scale: *1 – not at all, 5 – to the greatest extent*)

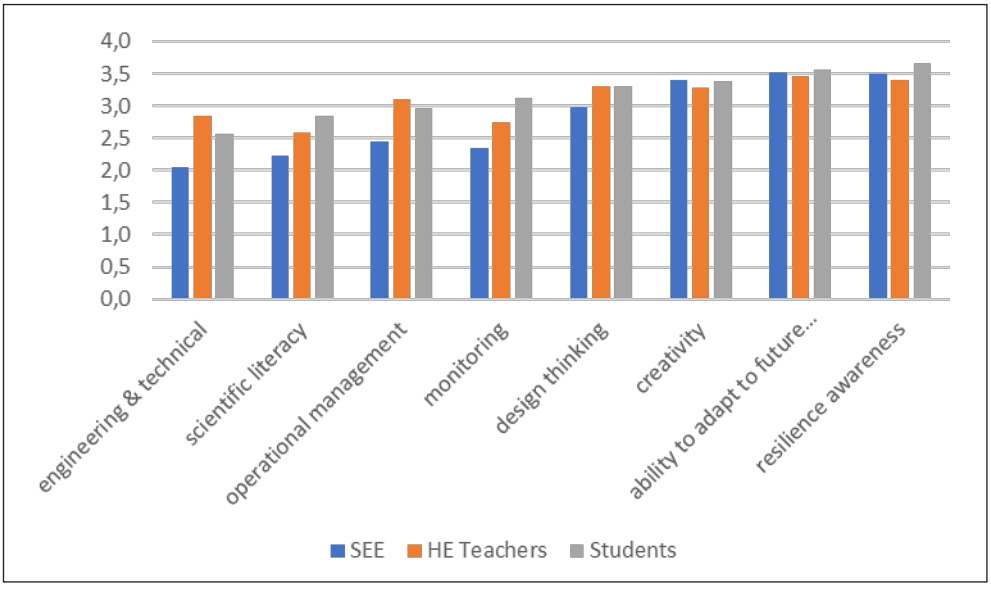
Area	HE Teachers	Students
production	4.48	4.34
transport & storage	4.12	4.09

Area	HE Teachers	Students
sales	3.64	3.46
finances	3.55	3.19
advertising	3.45	3.53

Source: own elaboration based on the research.

The most important part of the green skills survey was the question "To what extent do employees and students in social economy enterprises acquire green skills?" Respondents (from all groups) were most likely to mention typically "soft" aspects: creativity, ability to adapt to future challenges and awareness of resilience (Figure 2).

Figure 2. Indication of opportunities to acquire specific skills in social economy organisations (scale: *1 – not at all, 5 – to the greatest extent*)



Source: own elaboration based on the research.

As before, a rather interesting result was obtained by correlating the different areas of green skills acquisition in social economy entities according to the declaration of knowledge of this concept (Table 5).

Table 5. Areas of acquisition of "green skills" in social economy enterprises according to the declaration of knowledge of the concept

Specific Area	Yes	No	Don't know
engineering & technical	49.4	30.3	20.4
scientific literacy	49.8	28.7	21.4
operational management	49.1	30.3	20.7
monitoring	50.1	29.8	20.1
design thinking	51.7	28.2	20.1
creativity	50.2	28.2	21.6
ability to adapt to future challenges	50.9	29.1	20.1
resilience awareness	50.4	30.4	19.3

Source: own elaboration based on the research.

The area most frequently cited by respondents who said they were familiar with the term green skills was "design thinking". More than half of the indications also related to "monitoring", "creativity", "ability to adapt to future challenges" as well as "resilience awareness". For respondents who explicitly stated that they were unfamiliar with the concept, the references were evenly spread across all the propositions, although almost 1/3 of the references were in the area of "resilience awareness", as well as in areas not typically associated with the social economy: "engineering and technology", "operational management". For respondents who were not confident in their knowledge of green skills, "scientific literacy" and "creativity" were identified as specific areas where these could be acquired in social economy enterprises.

The above results indicate the important role of expertise, which underpins the possibility of developing green skills in specific areas (e.g. social economy actors). Not only rules imposed from above, but also personal responsibility expressed in knowledge and shaped skills can lead to good results in participating in the green transformation. The broad perspective that emerges from the research and the emphasis on knowledge gives room for a variety of actions. By combining different areas: legal, political or organisational, as well as individual actions, a positive, synergistic effect can be achieved that benefits the whole community and sustainable development.

Conclusion

Emphasising the importance of green transformation through political action and (if necessary) legal operationalisation can be of inestimable value in the process of shaping behaviour to better protect the natural environment. It is the European Union that is unfolding a series of powerful political efforts to stimulate and coordinate the integration of environmental and climate considerations into all levels of education and training, as well as to support public and private organisations in their skill-building investment projects. The EU, as the political leader of the green transformation, is committed to pushing forward the priority of making people aware/more conscious, urging them to adapt and educate, developing new skills not only to develop but also to make EU countries more resilient to crisis.

Where the law does not meet the economic challenges/keep pace with reality, or where it is not certain whether there is a need to cover a problem with a legal prescription, there is ample space to develop patterns or good practices to be used. The fundamental economic changes, which include new practices in a wide range of sectors, trigger a legal adaptation that is consistent with the standards that emerge on a daily basis, as economic actors follow the rules of economic calculation and social respect.

By endorsing the Pact for Skills, as part of the European Skills Agenda and based on the European Pillar of Social Rights, the EU has recognised the commitment of a wide range of stakeholders: enterprises, public authorities at national, regional and local level, workers, industrial organisations, social partners, education and training providers, chambers of commerce and employment services. This message confirms the bottom-up approach in the process of supporting the delivery of incentives (through networking, knowledge updates, guidance and resource facility) to upskill and reskill workers in the European Union countries and beyond. By shaping social attitudes that are open to identifying (green) market opportunities and ready to apply them in business projects, the stable foundation for environmentally and economically friendly solutions is designed and operated.

In the process of political and legal adaptation in the sense of green competence development, the expertise forged in social economy entities is of key importance. The sense of agency, responsibility and flexibility that characterise these organisational structures is a fertile ground for the growth/stimulation of cognitive, affective and even psychomotor dimensions of green skills in particular.

In order to transform the workforce in all sectors and at all levels in the adaptation of production processes to the changes brought about by environmental requirements, technical and soft skills and an understanding of sustainable development are

indispensable. Values and attitudes are also the basis for effective communication, negotiation, conflict resolution and leadership.

No less important is the ability to respond to incentives for cleaner production, more circular production and consumption, more low-carbon technologies, networking and dissemination of good practices (lean production management, life-cycle management).

The creation of social value, while protecting the natural environment, neutralising environmentally harmful practices and promoting environmentally friendly activities, supports the processes of seeking to diversify sources of income and business models open to the socialisation of profits. The catalytic role of local resources in recognising the complementarity of green technologies and organisational practices, as well as norms and expectations, could be of particular added value through sectoral and/or regional initiatives.

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For many years legal thought and practice focused on the general concept of environmental rights as a legal tool meant to enforce the human right to a healthy and sustainable environment. Whilst there is an undeniable link between human rights and climate change, as illustrated notably by the global phenomenon of the climate change litigation, this monograph focuses on the growing role of potential, sectoral fundamental rights and tailored remedies available in the EU legal order in absence of a substantive fundamental right to a healthy environment in EU law. Against the background of the European Green Deal and its ambitious climate-neutrality goal by 2050, the book echoes the sustainability-based approach and its limits.

Contributors analyse two interrelated perspectives. On the one hand, authors explore the procedural dimension by discussing the climate litigation and the limits of the concept of human environmental rights, state liability for loss and damage caused to individuals as a result of breaches of EU law, national remedies available in case of bad condition of the environment as well as the limits of the public interest litigation and challenges related to climate claims against private actors in national law. On the other hand, contributors discuss substantive aspects from a global perspective of food insecurity, soil monitoring and resilience as well as digitalisation, green skills and climate-induced migration. With insights from leading experts, this work highlights the evolving tensions and expectations within the EU legal framework.

Essential for legal practitioners, policymakers, academics, and students of law and administration, this book offers a comprehensive exploration of the intersection between sustainability, climate action, and the protection of fundamental rights in EU law.

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