POLICIES FOR A GREEN TRANSITION

Exploring contemporary environmental and sustainability policies for green guidance

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Abstract

This paper explores the current international landscape for environmental and sustainability policies. It finds a strong consensus exists around the need to address climate change, with many countries utilising the UN's Sustainable Development Goals to do this. Key arenas for action are labour market policy and education policy which creates an important context for green guidance. Currently, there is relatively little specific policy which addresses the role of career guidance in the green transition. Despite the policy busyness discussed in this report, it is also clear that current policy initiatives are insufficient to meet the primary policy aims of limiting the impacts of climate change and stopping environmental destruction. This policy failure also provides an important context for the development of green guidance. The implications of this policy environment are discussed with reference to their implications for career guidance and a series of recommendations are set out.

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Executive summary

This paper explores contemporary environmental and sustainability policies to provide an evidence base for thinking about the role that (green) career guidance can play. It is based on a rapid evidence review of international policy documents, relevant academic literature and case study reviews in six European countries (Czechia, France, Norway, Poland, Portugal and Slovakia).

Climate policies

The paper begins from the position that climate change and other forms of environmental destruction are real and that they are a defining policy issue for all countries. The review demonstrates that this position is the dominant policy logic that all international actors and nation states buy into. The findings of the Intergovernmental Panel on Climate Change (IPCC) are clear, climate change is happening, it is already causing problems for the global community, these problems are likely to increase, and current policies are insufficient to deal with them. This position is endorsed by all other major actors in the space.

There is also a clear recognition that environmental issues are bound up with economic and social issues. Environmental destruction is driven by the powerful and experienced most violently by the most vulnerable. Consequently, it is impossible to separate environmental and social justice and to address one without addressing the other.

Addressing climate change and other environmental issues requires radical policy thinking. Societies and economies across the globe will need to go through a *green transition*. This includes proposals for initiatives such as 'green budgeting' and 'green new deals'. Most of the case study countries have developed national strategies and policy infrastructures, sometimes including the involvement of wider civil society, for moving this issue forwards.

The UN's Sustainable Development Goals (SDGs) have provided an important framework for countries to take forward their national approach to sustainability as it consciously draws together social, economic and environmental development and transition.

Greening the labour market

The green transition is going to require substantial reorganisation of the labour market. It will result in sectoral, occupational and skills shifts and cause considerable changes for both those entering the labour market and those already in it.

Jobs can be divided into green (pro-environment), white (neutral) and brown (anti-environment) categories. However, it can be challenging to definitively

allocate jobs to each of these categories. Consequently, the definition of a green job is likely to remain contestable and to be something that career practitioners will need to develop expertise in and discuss with their clients.

The volume of green jobs is expected to grow, through the growth of existing (green) occupations, the greening of existing (brown and white) jobs and the emergence of new (green) occupations. This is likely to result in increased demand for higher level and green relevant skills. While overall this will require a relatively small proportion of the global workforce to shift sectors, its impact will be unevenly distributed with sectors like agriculture, forestry, fisheries, energy, manufacturing, recycling, construction and transport experiencing the most profound transformations.

On average green jobs are more likely to offer decent work. This increases the importance of ensuring that everyone has a chance of accessing these new opportunities. The most important factor in driving access to green jobs is increasing demand, however training and other supply side initiatives, including employment programmes, also have a role to play.

Greening the education system

There is a substantial body of research, thinking and practice which addresses how environmental issues can be addressed within the labour market. One of the most important frameworks that has emerged from this work is UNESCO's Education for Sustainable Development (ESD) framework. Many countries have adopted all or parts of the ESD approach. More recently the European Commission has launched GreenComp which is its own framework which is designed to codify the competencies needed for the green transition.

These frameworks and various other approaches to environmental and sustainability education are represented in a variety of school, vocational education and higher education initiatives across the case study countries. Environmental education is an important movement across the globe, albeit one which is rarely at the centre of national frameworks for curriculum or qualifications.

Greening guidance

There is limited policy that specifically addresses the role of career guidance in the green transition. But, there is emergent evidence which demonstrates the role that it can play in public employment services and in the education system.

Criticisms and areas of concern

The discussion so far has emphasised the reality of policy action in a variety of areas relevant to green guidance. However, it is important to set this discussion in context. While current levels of policy action are often an improvement on the past, they remain insufficient to prevent global warming and wider environmental destruction. There are a range of reasons, why policymakers have

been unable to act as decisively as necessary, but this reality has to inform the development of green guidance. In other words, green guidance cannot merely administer existing environmental policy, but also must help people to consider how to move forward faster and more effectively in relation to the environment.

Recommendations for the development of green guidance

The discussion above provides a strong insight into the policy context in which green guidance initiatives are intervening. Given this we would make a series of recommendations that should be taken into consideration as models for green guidance are developed.

1. Green guidance is needed.
2. Green guidance needs to be ambitious in its scope and aims.
3. Green guidance needs to attend to social justice.
4. Guidance professionals have a role to play in helping people to understand, choose and create green jobs.
5. Career guidance needs to act on both the supply and demand side of the labour market.
6. Green guidance needs to address training and retraining rather than just occupational switching.
7. Green guidance should connect to wider frameworks for environmental and sustainability education.
8. Green guidance needs to adopt a critical edge and recognise that existing policies around the green transition are insufficient.

1) Introduction

The Intergovernmental Panel on Climate Change (2023, p.42) concludes that '*Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020… This has led to widespread adverse impacts on food and water security, human health and on economies and society and related losses and damages to nature and people (high confidence).*' It goes on to show that while there has been substantial policy and popular buy in to the idea of mitigating climate change, the implementation of policies is currently falling well short of what is needed. This has been emphasised by a recent survey of climate scientists who report that if the current trajectory is maintained, and regardless of current policy rhetoric, they expect global temperatures to rise to at least 2.5C (4.5F) above preindustrial levels this century (Carrington, 2024).

Environmental change, and particularly climate change has become the defining political issue of the contemporary age. It is an issue capable of mobilising hundreds of thousands of protesters onto the streets of capital cities, but also one which requires the engagement of politicians, public servants and technical experts. It is at once existential, political, technical, contested and complex. Increasingly there is a recognition that it is something that cannot be ignored and that societies and economies across the globe will have to undertake a *green transition* in response.

In the *Exploring green guidance* project, we are examining how career guidance can be used as part of a wider policy solution to the problem of environmental destruction and climate change. We recognise that green guidance cannot be the whole solution to these problems and that it is an activity that is deeply embedded within education and/or employment policy in most countries. Given this, it is important to build an understanding of the policy landscape within which green guidance policies and practices will operate.

This document sets out the findings of a rapid review of the policy context for green guidance. It shows that while there is very little policy which directly seeks to fund, regulate and shape 'green guidance' there are a wide range of policies which provide important context for any development of green guidance. These include policies which establish overall societal policies for environmental action, those which examine how environmental changes might be addressed in employment and active labour market policy and those that seek to embed environmental thinking within the education system.

The review is based on two main approaches. Firstly, a narrative review of key European and international policy documents has been undertaken. This has been supplemented with the review of some relevant academic literature, particularly that which comments directly on this body of policy. We have

generally limited discussion to documents produced over the last decade as this is such a rapidly changing field, but we have also included some older documents where they are identified in more recent documents as seminal. A total of 51 documents was reviewed for this part of the review.

Secondly, detailed desk reviews have been undertaken by project members in Czechia, France, Norway, Poland, Portugal and Slovakia. These country-based reviews are discussed as case studies of how these international policy agenda manifest within individual countries policy landscapes. To complete the desk reviews, local experts drew on their existing knowledge, web searches and engagement with local experts as well as local reviews of policies and documents. Details of the experts who contributed to this review are set out in Figure 1.

Country	Experts
Czechia	Kateřina Hašková, Milada Karasová (CETERAS), Helena Košťálová (EKS) and Lenka Němcová (EKS).
France	André Chauvet (André Chauvet Conseil), Arnaud Wuilleumeir (Conservatoire National des Arts et Métiers), and Tomáš Šprlák (ZKPRK)
Norway	Ingrid Bårdsdatter Bakke (Inland Norway University)
Poland	Marta Wrzosek (Katalyst Education and SWPS University)
Portugal	Mariana Lucas Casanova (IPP)
Slovakia	Iveta Karnayová (Central Office of Labour, Social Affairs and Family), Ladislav Ostroha (Association for Career Guidance and Career Development), Ildikó Pathóová (Ministry of Education, Research, Development and Youth), and Tomáš Šprlák (Association for Career Guidance and Career Development).

Figure 1. Country experts

2) Environmental policy

At the international level there is strong agreement that there is a major environmental crisis and that public policy action is required to address this. The IPCC (2023) concludes that global warming and a range of other climate effects are worsening and are likely to continue to get worse unless mitigation efforts step up. They conclude that '*there is a rapidly narrowing window of opportunity to enable climate resilient development*' (p.97). Elaine Kamarck (2019) of Brookings provides a pithy, but terrifying description of what it will look like if such attempts to stop climate change fail.

> *Whole parts of the globe will become too hot for human habitation and those left behind will die of heat. Diseases will increase and mutate. Food shortages will become chronic as we fail to move agriculture from one climate to another. Whole countries like Bangladesh and parts of other countries like Miami will be underwater. Shortages of fresh water will affect humans and agriculture. The oceans will die, the air will get dirtier… As climate change takes its toll on Earth's physical planet, it will also cause social, economic, and political chaos as refugees flee areas that can no longer sustain them.*

The effects of global warming and other environmental degradations are already felt across the population, but they are most acute for the most vulnerable. The IPCC (2023) notes that globally it is those who have done least to cause environmental destruction who face its worst effects, with poor and disadvantaged individuals, communities and nations most likely to see impacts on their living standards. The OECD (2021) describes this as the '*inequalities-environment nexus*' and provides detailed evidence of the differential impacts on health, income and wealth, work and job quality, and safety caused by environmental change. These factors lead to a need to address climate change and social justice issues concurrently.

The European Union and its predecessor bodies have had environmental policy since 1972, with the EU climate law signed in 2021 which binds the EU to achieve climate neutrality by 2050 (European Parliament, 2024). Internationally the core negotiations on this issue are handled within the framework of the *United Nations Framework Convention on Climate Change* (UNFCCC) (UN, 1992) at the annual UN Conference of the Parties (COP) meeting.

The COP was responsible for establishing a key metric that has become central to policies on climate change. The idea that global warming should be limited to 1.5°C above pre-industrial levels. This was agreed in Paris in 2015 at COP21 (UN, n.d.b). Subsequently countries have been required to submit national climate action plans, known as nationally determined contributions (NDCs). These are now being supplemented by the Global Stocktake (UN, n.d.c) which assesses

global progress on these issues. The COPs then seek to move forwards the international framework for addressing climate change. Following COP28 a communication was issued that urges that countries '*meet the urgency of the moment*' and '*move quickly from negotiated text to real world implementation*'. Current estimations suggest that limiting global warming to 1.5°C is unlikely and that 2.5°C is a more probable destination based on current policies (Carrington, 2024).

The OECD (2008) argues that the cost of addressing the environmental crisis is affordable and that the price of failing to address it is high. Increasingly the focus of environmental policies is the concept of Net Zero which means cutting carbon emissions to a small amount of residual emissions that can be absorbed and durably stored by nature and other carbon dioxide removal measures, leaving zero in the atmosphere (UN, n.d.a). The OECD (2023) builds on this, arguing for the need for Net Zero +, which emphasises that we not only need to hit the carbon targets required to reduce global warming, but also to do so in a way which will be fair, equitable and just. Similar arguments have also been made by the ILO and are particularly important in relation to low- and middle-income countries (ILO, 2016).

To address environmental concerns countries are likely to have to change the way in which they manage their finances (Marinheiro et al., 2022). The idea of 'green budgeting' is one approach that can be used to achieve this through techniques such as carbon taxes, the tagging of environmental spending and the issuing of green bonds to finance environmental and sustainability projects.

Many countries have sought to respond to these challenges through the creation of some kind of Green New Deal. The Green New Deal is a phrase that has been used widely for several years. One of the earliest attempts to codify it was set out by the Green New Deal Group (2008), which was convened by the New Economics Foundation in the UK. This version of the Green New Deal recommended government-led investment in energy efficiency, the creation of thousands of green jobs, increased taxation on oil and gas companies, wider financial reforms designed to foster longer-term and more equitable investment. The essence of the Green New Deal idea is the combination of economic, environmental and social justice reforms in an attempt to make the green transition politically and socially desirable.

The UN proposed its *Global Green New Deal for Climate, Energy, and Development* in 2009, describing it as '*a big push strategy to drive down the cost of renewable energy, ramp up deployment in developing countries, end energy poverty, contribute to economic recovery and growth, generate employment in all countries and help avoid dangerous climate change*'. In Europe this has been reimagined as the *European Green Deal* which promises to deliver Net Zero by 2050, economic growth decoupled from resource use and

no person and no place left behind (European Commission, 2024). The European Green Deal has been adopted wholesale by several countries including Portugal.

Environmental policies in the case study countries

All the case study countries have developed a national policy or strategy to address climate change. So, in Poland the Ministry of Climate (2019) have launched *The 2030 National Environment Policy* which includes phasing out Poland's reliance on the coal industry. Yet not everyone in the country is convinced that Poland's climate policies are sufficient, with a recent survey of young people in Poland reporting that young people view the country's progress on these issues negatively (Paradowska et al., 2023).

Slovakia has also determined to phase out coal by 2033 and developed the *Territorial Just Transition Plans* to manage its transition to a post-carbon economy. The focus on the green transition is also set out in the *Slovak Recovery and Resilience Plan (RRP)*.

The State Environmental Policy (SEP) of the Czech Republic 2030 sets strategy for environmental policy in the Czech Republic and formulates strategic and specific objectives. Fulfilment of the SEP 2030 is monitored and coordinated through regular meetings of the platform for monitoring the SEP 2030 fulfilment progress, whose members include representatives of government, public administration bodies, academia and non-governmental organizations and associations. A key element of the SEP is the *Climate Protection Policy (CPP)* (Ministry of the Environment, 2017) which is based on the EU Climate and Energy Package, the Paris Agreement, and other relevant European legislation. However, environmental organisations such as the Climate Coalition within the Czech Republic have been critical of these policies arguing that the country continues to have one of the highest per capita emissions of greenhouse gases and that its policies are insufficient to meet its responsibilities as set out in the Paris Agreement.

France has committed to the *National Low Carbon Strategy (SNBC)* (Ministry of Ecological Transition and Territorial Cohesion, 2022) which is supported by the Ecological Transition Agency (ADEME - Agence de la transition écologique) which has defined a roadmap for the implementation of the strategy. In France the recovery and ecological transition contracts are an example of a 'green new deal' type policy which combines social and environmental investment in ways that employ people and develop the skills of workers.

Portugal has developed the Agência Portuguesa do Ambiente (APA, Portuguese Agency for the Environment, https://apambiente.pt/) as the national public institution responsible for the implementation of environmental policies in the country. Its responsibilities include monitoring, planning and evaluation, licensing and inspection. The country is focused on reducing greenhouse gases through the reduction of emissions and increasing carbon sequestration (mitigation) and through these actions to achieving carbon neutrality by 2050.

This is enshrined in the Portuguese Basic Climate Law (Assembleia da República, 2021). Portugal's Ministry of Environment and Climate Action has developed a programme (taking place between 2023 and 2024) for the public participation of citizens, civil society organisations, academia, companies and local authorities in the creation of a *New Green Pact*, inspired the EU Green Deal (New Green Pact Mission Unit, 2023).

These kinds of national political strategies are critical to achieving the green transition. The responsibility for moving towards a more sustainable society cannot be left to either consumer choices or supply side interventions in the labour market (such as career guidance and training). But if major strategic choices are made, supply side interventions are likely to be important in bringing about these changes.

UN sustainable development goals (SDGs)

If the COP process provides some quantitative targets and accountability for the green transition, the UN's *2030 Agenda for Sustainable Development* provides a vision for what sustainable policy can look like. It was adopted by all United Nations Member States in 2015 (UN General Assembly, 2015) and provides an overarching framework for public policy which includes environmental, economic and social goals. Its core contribution is the 17 Sustainable Development Goals (SDGs), which make the argument that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, spur economic growth, and tackle climate change and other forms of environmental destruction.

Figure 2. The UN Sustainable Development Goals (SDGs)

The IPCC (2023) argue that while the SDGs are wider ranging than purely environmental goals, they provide a strong framework for moving forwards due

to their ability to retain a focus on economic and social justice concerns as part of moving towards sustainability. However, policy making will need to carefully attend to the mitigations and adaptions needed to move all public policy goals forwards whilst attending to climate change.

The SDGs have been adopted widely across all the case study countries. In Poland the principle of sustainable development has been integrated into the Constitution and the implementation of the SDG's is formally monitored by the Ministry of Development (n.d.) and supported by the Team for Sustainable Development and Corporate Social Responsibility which works to co-ordinate governmental and non-governmental actors. Governmental and non-governmental activities around the SDGs are captured on Poland's Sustainable Development Goals Platform (www.onz.org.pl).

In Norway the SDGs are adopted as an overarching framework for government policies (Regjeringen.no, 2021a). This includes addressing labour market and educational issues and a brief mention of career guidance. The government includes a sustainability department which has a focus to drive forwards the green transition. The Norwegian government then receives annual reports on its progress in implementing the SDGs.

Similarly, Portugal has signed up to the SDGs as core policy goals and the government receives regular reports on progress towards meeting these goals. As well as cross-ministerial government involvement in meeting the SDGs, Portugal also involves a range of government agencies and non-governmental organisations (Fundação Calouste Gulbenkian, 2019). Business involvement in the agenda is led by the Business Council for Sustainable Development (BCSD) Portugal.

The Slovak Republic also signed up for the implementation of the 2030 SDG Agenda. The main foci for Slovakia's strategy are to address climate change, water, protection of biodiversity, protection and sustainable use of natural resources and waste management, sustainable consumption and production, especially with an impact on circular economy policy and green growth (Ministry of Environment, Slovak Republic, 2020). The strategy includes an institutional framework for implementing these goals, involving various stakeholders from government, academia, NGOs, and the public. It emphasises the importance of better data collection and decision-making processes to inform and verify the effectiveness of environmental policies. Sustainable development goals (SDGs) also serve as a reference framework for Slovak companies and their respective CSR (corporate social responsibility) departments and programmes. Many companies pledge in their strategic and promotional materials to adhere to SDGs as part of their branding. The NGO Pontis foundation organises yearly SDG Awards to publicly recognise companies and businesses that contribute to achieving SDGs and a private company (SmartHead) has developed an app which enables companies to manage, track, report and share their

achievements with respect to ESG (Environmental, Social, Governance) and compliance with SDGs.

The Czech Republic is also committed to implementation of the SDGs and has established a Government Council for Sustainable Development, which is a permanent advisory, initiating and coordinating body of the Government in the areas of sustainable development, strategic management and long-term priorities of the State.

3) The labour market

The green transition is likely to be one of the main factors influencing the development of the labour market over the next few decades (Cedefop, 2023). This is likely to be felt across all sectors although with some sectors experiencing a particularly large shift in their occupational mix or job content. This is also going to be accompanied by a need for increased innovation and entrepreneurship as we search for new ways to organise the economy that fit with the green transition.

Commentators argue that this shift requires purposeful action from government and other labour market actors. For example, the French think tank, France Stratégie (2023) argue that there is a need to support interprofessional mobility through training and retraining, particularly in relation to workers from threatened sectors, support the transferability of skills (for example, through the validation of prior learning), and change recruitment practices to welcome candidates from different professional backgrounds. France Stratégie also describes a range of initiatives developed by the French Ministry of Labour to support the green transition in the labour market including both training initiatives and consultancy support for businesses to transition their Human Resource Management approaches.

A key aim of green labour market policy is to recognise and support the growth of what are often called 'green jobs' and the corresponding shrinking of 'brown jobs' (Vandeplas et al., 2022). The argument is frequently made that to achieve a green transition there is a need for a labour market transformation (the greening of the labour market) in which many people can be expected to move towards green jobs (Bohnenberger, 2022a).

For some commentators this shift offers an opportunity for a growth in employment and the creation of new forms of decent work (Jacob et al., 2015), while for others the shift to green jobs is viewed as a more technical process akin to other forms of retraining and skills alignment, while still others worry that it will lead to a reduction in employment due to a dampening effect on the economy. The balance of opinion suggests that the overall impact of the green transition will be positive on the number of jobs, but that it is likely to create the need for substantial levels of change and flexibility (Duell et al., 2021; ILO, 2018; van der Ree, 2017). What everyone agrees on is that if there are going to be substantial social changes either to prevent climate change or in response to it, this is going to have major impacts for the work that people do and for the organisation of the labour market (Consoli et al., 2016).

What is a green job?

Vandeplas et al. (2022) describe a typology of three types of jobs in the European Union.

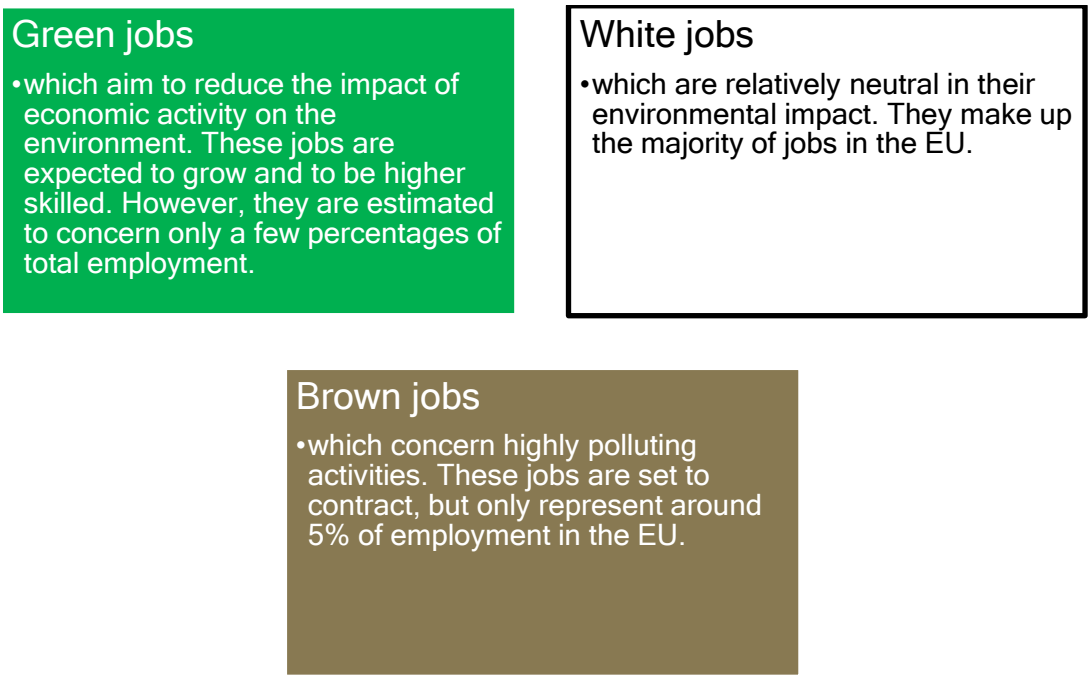

Figure 3. Green, white and brown. A typology of jobs.

While this typology is seductive and appears to offer a framework for labour market action, it remains challenging to agree what constitutes each of these different job types. Consoli and colleagues (2016) argue that there are four main ways to classify green jobs. These are jobs that are involved in: green processes e.g. waste management; green products and services e.g. the creation and selling of hybrid cars; green industries e.g. renewable energy; or green occupation e.g. mapping which specific jobs, and associated skills, are key to sustainability. Bohnenberger (2022b) argues that it is possible to do this occupational mapping by assessing jobs in relation to:

- what the sustainability of the jobs output is;
- what proportion of workplace tasks are green;
- whether workplace conditions promote sustainable living; and
- what the resource and energy efficiency of the job is.

A similar approach is advocated by the German Federal Ministry for Economic Co-operation and Development (Jacob et al., 2015). The ILO offer a different definition which views green jobs as those that: improve the efficiency of energy and raw materials; limit greenhouse gas emissions, minimise waste and pollution; protect and restore ecosystems; and/or adapt to the effects of climate change (van der Ree, 2017). The European Commission is currently working on ways to rank the greenness of different occupations in a robust way that can underpin the proposition of a new European typology (ANPAL Servizi, 2023).

In France, green jobs are defined in three ways: as an *eco-activity* which produces goods or services with the direct aim of environmental protection or sustainable resource management; a *green job* which contributes to measuring, preventing, controlling, or correcting negative impacts and damage on the environment; or as a *greening/greenifying job* which is a profession whose primary purpose is not environmental, but which necessitates new skills that are related in a significant and quantifiable way to the environment. These jobs are being brought together into a new standardised list of green occupations (Onemev, 2022).

A report by Prata et al. (2009) argues for a move away from purely environmental definitions of green jobs, in favour of a broader definition which aligns with contemporary thinking on sustainability which includes focus on social and economic elements of sustainability.

As these various definitions show, establishing a robust and defensible definition of green jobs is challenging, but some kind of normative process is needed to allow a distinction to be made between green, white and brown jobs for the purpose of policy making and measurement. However, the Office for National Statistics in the UK (2021) argues that the best definition is likely to be a composite one, which combines a variety of these different approaches.

It is not necessarily the case that the simple categorisations of green, white and brown jobs are useful in relation to career information. For many, probably most, people the choice may not be between green and brown jobs but rather between white jobs with varying degrees of green or brown tinge. Consequently, it may be necessary for careers practitioners and their clients to address these issues more subtly and ask a variety of questions about the job tasks, outputs and wider impacts on sustainability.

Demand for green occupations

The number of green jobs will grow through three interlinked processes (Consoli et al., 2016, PAGHC, 2017).

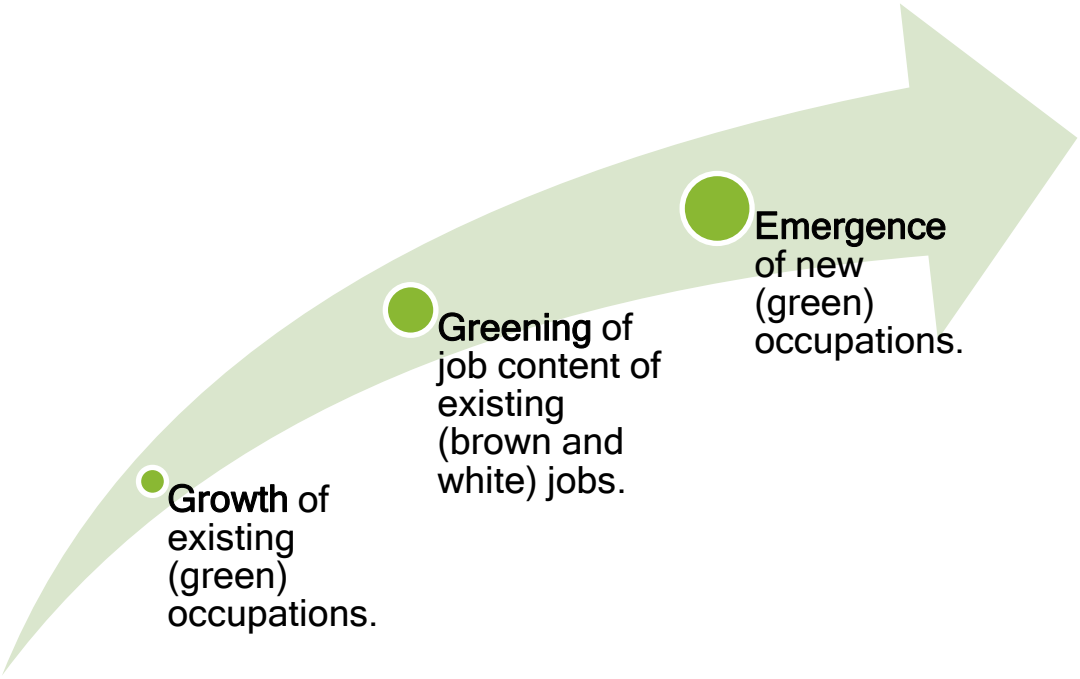

Figure 4. The greening of the labour market

At the same time, the number of brown jobs should decline as environmentally destructive industries become less prevalent (van der Ree, 2017). Overall Consoli and colleagues (2016) conclude that this shift to higher levels of green jobs is likely to result in increased demand for higher levels of education and skills across the labour market.

The IMF (2022) concur with this estimation arguing that this will lead to around an additional 2% of the global workforce changing sector over the next 30 years. However, the need for sectoral shifting is likely to be much greater in some regions, sectors and occupations than others, meaning that the effects of the green transition will be felt in an uneven way across society (Asikainen et al., 2021). Sectors that are most likely to be impacted by the green transition include agriculture, forestry, fisheries, energy, manufacturing, recycling, construction and transport (PAGHC, 2017). This may require the direction of higher levels of transition support to some sectors, areas and groups than others.

Both the IMF (2022) and the ILO (2018) note that the average green job is better paid and less precarious than the average brown job, suggesting that there may be individual career value in workers making the move to green jobs. However, there is also evidence to suggest that access to green jobs is unevenly distributed with people in some regions, as well as women and young people being less likely to be able to access such jobs (Valero et al., 2021). Consequently, many policy commentators emphasise the importance of the growth of green

jobs increasing and ensuring the equity of access to decent work (ILO, 2018; Valero et al., 2021).

The IMF argues that transitions to green jobs are primarily driven by increasing demand (creating more green jobs), but also recommend action on the supply side, particularly around the training of workers in green skills. Commentators (Jacob et al., 2015; PAGHC, 2017) note that a lack of relevant 'green' skills is likely to slow down the progress of the green transition. Cedefop (2021) has begun the process of mapping these skills needs, finding that some of the biggest gaps in the European economy caused by the green transition are likely to be around green construction, science and engineering, driving, refuse and recycling and administration.

Some of these issues can be seen being played out in our case study countries. For example, Poland has a long history of extractive industries (e.g. coal mining) as well as an economy that is strongly reliant on agriculture (Institute of Labor Market Analysis, 2022; Konfederacja Lewiatan; 2022). As a result, the country has a significant transition to manage, which has so far proved difficult with the green transition often viewed as an 'ecological' rather than 'economic' issue. This has led to a net outflow of skills and labour to other European countries rather than to a genuine greening of the Polish labour market.

In Norway the government has identified the green transition as a key economic priority where it needs to invest in the development of new skills (Regjeringen.no, 2023).

Development of green jobs and skills programmes

A range of examples from the case study countries illustrate ways in which countries are trying to intervene into the labour market to support greening.

In France the Jobs and Skills Programming Plan (PPEC) has been developed with the aim of examining '*under what conditions employment, training and professional development policies could be consistent and in synergy with the objectives set by the energy and ecological transition*' (Baghioni & Moncel, 2022). This has then been supported with changes to the law and policy and funding for new programmes. The government has also launched a *National Observatory of Occupations of the Green Economy* to develop expertise and knowledge about the French green labour market (Ministry of Ecological Transition and Territorial Cohesion, n.d.).

In Portugal the *Green Skills & Jobs Programme* was established by the ministries of Labour, Solidarity and Social Security, and Environment and Climate Action. It aims to promote vocational training in the energy sector, fight unemployment and speed up the energy transition. According to this Ministerial Order, the *Green Jobs & Skills Programme* will define 'training projects' in the area of renewable energies and energy efficiency for unemployed people registered with the *Instituto de Emprego e Formação Profissional* (IEFP – Portuguese

Employment Services) and for employees of entities affected by rising energy costs (IEFP, 2023). These projects consist of short and medium-term courses and/or training activities, in person and/or at a distance, lasting between 25 and 350 hours. Through this initiative, the government aims to provide training and retraining in the energy sector, preventing the risk of unemployment and encouraging the creation of green jobs. It prioritises workers who are involved in energy transition processes, at risk of unemployment or underemployment (associated with the energy transition) or whose gender is under-represented in the labour market.

4) The education system

There is a long history of research, thinking, policy and practice around sustainable and environmental education. Fien (2003) argues that this goes back to at least the 1970s, but that it has often struggled to find a solid place in the practice of educational institutions. UNESCO have been at the heart of the development of this kind of education since its inception. The organisation is currently leading a campaign to embed the UN Sustainable Development Goals into education systems across the world (UNESCO, 2020).

UNESCO & UNEVOC (2021) report that changes to education and the education system are reported by 95% of the countries sending documents to the UNFCCC Secretariat. However, these reports are typically at a high level and do not demonstrate strong engagement with areas such as the technical and vocational education system.

In Slovakia the national strategy for a greener Slovakia emphasises the importance of formal and informal education systems in promoting sustainable development (Ministry of Environment, Slovak Republic, 2020). The Ministry of the Environment supports a range of non-formal educational activities which are designed to create an integrated system of environmental education and awareness raising.

Education for Sustainable Development (ESD)

UNESCO's agenda around education and environmental sustainability is referred to as *Education for Sustainable Development (ESD)* and seeks to foster three main dimensions of learning.

- Cognitive learning dimension: Understand sustainability challenges and their complex interlinkages, explore disruptive ideas and alternative solutions.
- Social and emotional learning dimension: Build core values and attitudes for sustainability, cultivate empathy and compassion for other people and the planet, and motivate to lead the change.
- Behavioural learning dimension: Take practical action for sustainable transformations in the personal, societal and political spheres.

The ESD agenda seeks to create holistic forms of education which empower students in terms of knowledge about sustainability issues, increased emotional and attitudinal alignment with the sustainability agenda and a capacity to take individual, social and political action in support of this. The European Council (2022) officially endorsed UNESCO's ESD agenda in 2022, recommending that member states also engage with it and develop policy and funding to drive ESD in their own countries.

Many countries have developed resources to support the implementation of ESD in schools and other educational providers e.g. in France (https://agirpourlatransition.ademe.fr/acteurs-education/enseigner-animer).

GreenComp

The European Commission's Joint Research Centre has recently produced a new competence framework (GreenComp) which is designed to codify the competencies needed for the green transition (Bianci et al., 2022). This defines the key competences as follows.

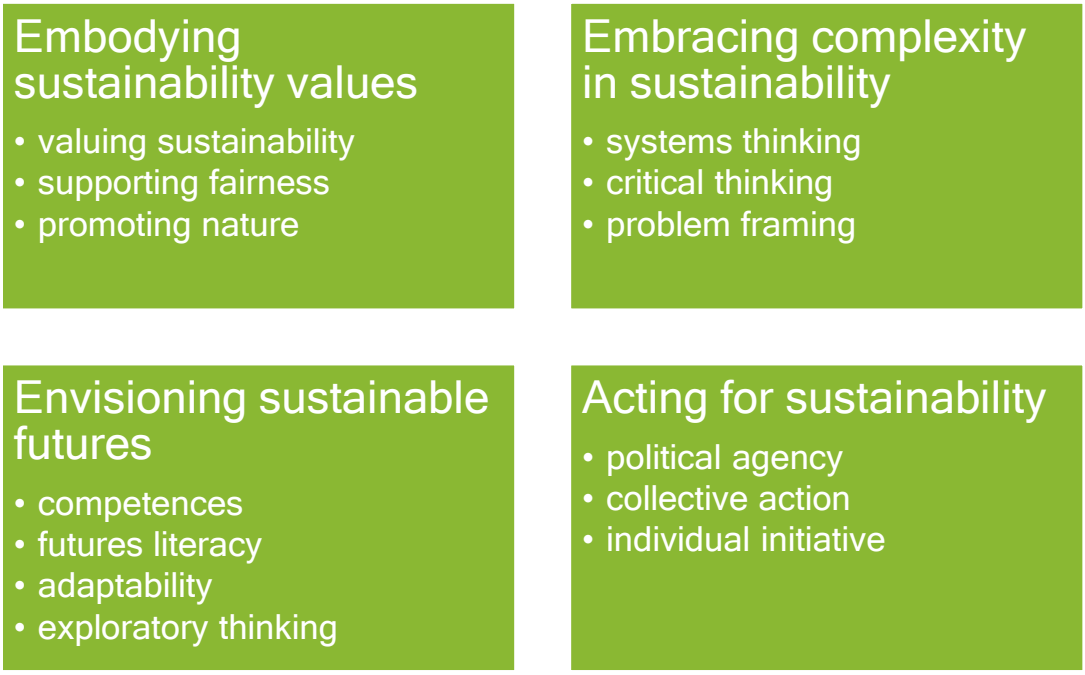

Figure 5. GreenComp: The European sustainability competence framework

It is currently unclear as to whether GreenComp has any policy support, but it does offer a clear framework for the development of career guidance which could be used to support career guidance practice and inform the development of a career management skills framework.

Green education in schools

Environmental education is represented in the school systems of a variety of the case study countries. For example, in Portugal, environmental issues are addressed through the curriculum for Citizenship education. This sets out how Citizenship and Development is implemented in public education from 6-18 years. It aims to promote the participation of all citizens in the construction of a more inclusive, just, and equitable society based on the principles of democracy, respect for diversity and human rights (Direção-Geral da Educação -DGE, 2017). This is supported by the Plataforma Nacional de Educação para a Cidadania (National Platform for Citizenship Education) which offers orientation, resources and activities for teachers and educators in 18 areas including sustainable

development (https://cidadania.dge.mec.pt/desenvolvimento-sustentavel) and environmental education (https://cidadania.dge.mec.pt/educacao-ambiental). Citizenship and development, including environmental and sustainable development issues, are also addressed in vocational and professional training and non-formal and informal citizenship education.

In Slovakia a process of curriculum reform is currently underway that promises to embed environmental education more strongly in the Slovak curriculum. This is supported by a national project called 'Digital skills for a green future' which is working with sectoral bodies to develop resources to support environmental education. One of the most prominent actors in the area of environmental education is NGO Živica which runs multiple environmental programmes including a nation-wide certification and educational programme Green School (Zelená škola). The programme lasts for one year and in 2023/24 is running in 181 schools across Slovakia.

In the Czech Republic environmental education is a cross-cutting theme in the primary school curriculum. In practice, this means that schools are obliged to include some form of environmental education, but the form and time allocation varies from school to school. There is a range of training (provided by private and non-profit organisations) for teachers who are involved in environmental education, but the form of this training is not regulated by the state (National Pedagogical Institute of the Czech Republic, n.d.)

In contrast a review of climate education in the school curricula of England and Poland found that it was weakly represented in both countries (Kozłowska, 2021).

Green vocational training

In addition to the embedding of sustainability learning into the existing education system there are also a range of calls for an increase in green vocational training for specific green occupations (Asikainen et al., 2021; IAG, 2022; PAGHC, 2017; UNESCO & UNEVOC, 2021). This may include both new forms of initial vocational training (Cedefop, 2022) and a range of forms of continuing professional development and on the job training to help people to adapt to the green transition.

The development of green vocational education and training needs to be done in dialogue with the social partners to ensure its relevance and effectiveness (ILO, 2018). However, PAGHC (2017) argue that it is important that vocational education and training is not merely responsive, but also leads industry through the development of cutting-edge green skills. The ILO (2022) argues that this needs to be accompanied by a concerted attempt to green technical and vocational education including shifts in what is learnt, how it is learnt and the environmental impact of the learning organisations and learning processes themselves.

In France, the government has been revising diplomas to integrate environmental concerns into training content. This has been supported by the government's Jouzel commission which has recommended that all higher vocational learning addresses the green transition (Jouzel & Abbadie, 2022). However, initial feedback suggests that it is critical that these developments on the supply side of the labour market are matched by demand for green skills from employers (Baghioni & Moncel, 2022).

Green higher education

The UN has issued guidance for higher education institutions, encouraging them to engage with sustainability and prepare their students to work in the green economy (Nishimura & Rowe, 2021). This document encourages higher education providers to develop students' environmental knowledge and skills through the curriculum, strengthen connections between education and employment to facilitate the movement of students into green jobs, develop green entrepreneurship and foster students' ability to act as advocates of pro-environmental change within all of the jobs that they work in.

In Norway, higher education institutions are viewed as having a special responsibility for bringing about the green transition (Regjeringen.no, 2018). This is particularly in relation to research and innovation but is also addressed in terms of the preparation of graduates for playing a role in the green transition (Regjeringen.no, 2021b).

5) Career guidance

There is limited policy that specifically addresses the role of career guidance in supporting these transitions. It is common to highlight the need to carefully monitor changes in the labour market and to use this monitoring to produce relevant labour market information (Asikainen et al., 2021). For example, there has been some attempt to develop 'green LMI' (Bircan et al., 2023, LMI for All, 2024; Repsol, 2023). This has included some development of the technical infrastructure for example through the development of a list of green skills within the European Classification of Occupations, Skills and Competencies (ESCO) (EC, 2022) or inclusion of green skills in the French ROME system of occupational information (France Travail, 2024). But it is much less common for there to be more detailed thinking about how this kind of LMI gets translated into something that people can use to inform education and employment decisions or the practice of career guidance professionals.

Bohnenberger (2022a) includes career guidance as one of the eight policies that are needed to green the labour market. It is also highlighted by Asikainen et al. (2021) in a publication for the European Union, with the argument made that there should be a lifelong entitlement to access (green) guidance.

In 2019, the Portuguese Psychologists' Association has signed a collaboration protocol with UNESCO's National Commission, creating the website http://www.ummundomelhor.pt/ which promotes behaviours for a sustainable development and seeks to collect information of practitioners on their actions regarding each of the SDG's. It also offers practitioners with resources that they can use: http://www.ummundomelhor.pt/recursos/. However, so far there has been no public dissemination of the data gathered through this website.

But, any mention that there is of career guidance is typically at a high level, with very little detail on what it actually looks like in practice.

Public employment services

There are some policy documents that recognise that public employment services and other active labour market programmes are likely to have an important role to play in lubricating the labour market during this period of change (Jacob et al., 2015; van der Ree, 2017; van der Ree, 2022). Van der Ree (2022) argues that career guidance has to be built into the public employment service delivery and Duell et al. (2021) argue that the green transition actually increases the demand for public employment services to deliver career guidance. They argue that such services should focus on activities such as skills profiling, identifying transferable skills, the provision of labour market information, upskilling and retraining. They also argue that it requires public employment services to collaborate with employers and other stakeholders. Given this public employment service staff are likely to need to be upskilled.

In France the National Employment Service (Pôle Emploi) has created a module to train its counsellors to support jobseekers to engage with the green economy. It is a short 50-minute module that also stipulates the role of the counsellors with jobseekers in regards to green economy (Takoma, n.d.). The 2023 specifications for private providers of the French Public Guidance Service (CEP) (The Conseil en évolution professionnelle) also requires the counsellors to provide information on career opportunities related to green transition (Service-Public.fr, 2023).

Guidance in the education system

In relation to the education system, the Inter-Agency Group on Work-based Learning (IAG) (2022) view high-quality career guidance as a pre-condition to the effective operation of a green vocational training system. While van der Ree (2017) emphasises the importance of support for young people transitioning from the education into the green economy.

In Portugal teachers deliver careers education through the Citizenship curriculum. This is supplemented by specific guidance for careers education which addresses environmental sustainability and the wider SDGs (Figueira et al., 2021).

6) Criticisms and areas of concern

The discussion above suggests that there is a strong commitment to environmental issues and challenging climate change amongst both international actors and national governments. As we have seen, there is strong agreement that something must be done and evidence of government activity across a range of domains. For those concerned with career guidance, it is particularly important that the labour market, the education and, critically, the connection between the two are seen as important arenas for environmental initiatives. There are even emergent initiatives which specifically address career guidance or related areas such as the employment support offered by public employment services.

Yet, it is important not to be misled by the flurry of policy activity. The IPCC (2023) is clear that not enough is being done by any governments and that the existential threat climate change remains. The activist Greta Thunberg (2021) puts it more bluntly, '*blah, blah, blah… This is all we hear from our so-called leaders: words - words that sound great, but so far have led to no action. Our hopes and dreams drown in their empty words and promises.*'

There is a substantial body of critique that has sought to explain why frameworks like the SDG's, processes like the COPs and policies like the Green New Deals have failed to deliver (Aronoff, 2021; Bernards, 2021; Carrington, 2024; Kamark, 2019; Levermann, 2019; Monbiot, 2023, Smith et al., 2023; Yang et al., 2020). Key areas of concern and criticism include:

- The power of fossil fuel companies and other vested interests over both international negotiations and national implementation plans.
- A democratic deficit in the way that decisions are made in international fora and negotiations, that often leaves those who benefit from environmental destruction (e.g. oil states) in a position to block decisions that might be critical to other, potentially much larger, countries.
- The failure of climate and environmental issues to become electorally critical to the politics of most nations.
- That environmental destruction is a classic 'tragedy of the commons' issue in which it is in everyone's short term interests to behave badly, but everyone's long term interests to behave well.
- An attempt to responsibilise the solution to the environmental crisis onto the individual rather than addressing it on a systemic level. For example, through approaches like the 'carbon footprint' which seek to account for the climate crisis through the monitoring of individual actions and distract attention away from the actions of corporations and governments.
- Over-confidence about the possibility of a techno-fix through technologies such as carbon capture, leading to complacency.
- The existence of substantial volumes of climate scepticism and climate denialism and their increasing representation within the political sphere.

- The development of sophisticated approaches to 'greenwashing' which seek to overstate the significance of, or misrepresent, initiatives to reassure people that action is being taken on the climate.
- A lack of hope that climate change can be averted.

When these issue, and other critiques of the failure of governments, businesses, individuals and other actors are combined with the some of the problems discussed already, the current picture of pro-environmental action become less positive. Yes, governments are generally committed to environmental policies and to the SDGs, but their commitment is often too limited or too slow to deliver the desired aims on the necessary timetable. Furthermore, it is worth pointing out that while the SDGs are a useful framework for policy, they lack specific commitments that are linked to climate targets and leave a great deal open to interpretation (Spangenberg, 2017). The SDGs have also been criticised for ignoring the potential contradictions that exist between their aims to drive economic growth and social development and the environmental aims that they also advance (Swain, 2018). In other words, whilst the strength of the SDGs is that they yoke together social, economic and environmental development, such a move may only be possible if the framework remains vague and actively ignores the challenges that bringing such policy aims together creates.

While many countries are experimenting with initiatives to support the labour market to go through a green transition, these initiatives typically mobilise a small element of the labour market and fail to stimulate the demand side sufficiently. Finally, while there is a lot of interesting practice around environmental education and education for sustainable development, there is nowhere where these initiatives are central to the education system at any level. Given these criticisms, it is likely to be important for green guidance to be able to support individuals to understand these debates and come to an informed position about how to respond to them and intervene in them.

7) Recommendations for the development of green guidance

The discussion above provides a strong insight into the policy context in which green guidance initiatives are intervening. Given this we would make a series of recommendations that should be taken into consideration as models for green guidance are developed.

1. Green guidance is needed. There is a strong consensus that a green transition is required and that shifts in sectors, occupations, skills and education are key components of it. Given this there is a strong rationale for green guidance.
2. Green guidance needs to be ambitious in its scope and aims. If green guidance is going to play even a modest role in the development of sustainable societies, it will need to be ambitious. This means both expanding its reach into the population and addressing people's careers in a holistic way that moves beyond just supporting them to make educational and occupational choices. This is likely to increase the need to discuss the interaction between learning, work, leisure, citizenship and a host of other elements of people's life projects.
3. Green guidance needs to attend to social justice. The recognition that climate change is substantially a consequence of the actions of the powerful and that it is experienced most substantially by the vulnerable needs to underpin the thinking of green guidance. In other words, green guidance cannot address environmental change without also attending to issues like inequality, decent work and equal access to education.
4. Guidance professionals have a role to play in helping people to understand, choose and create green jobs. Green jobs are difficult to define. It is likely to be more helpful for both guidance professionals and individuals to use a variety of labour market information and data to assess the relative 'greenness' of jobs as part of their career decision making.
5. Career guidance needs to act on both the supply and demand side of the labour market. While much career guidance work is focused on work with individuals, career guidance practitioners also have a role in engaging with employers and reflecting back their clients' and society's needs. Given this, career guidance practitioners need to be confident and competent to talk to employers about the need for the greening of the economy.
6. Green guidance needs to address training and retraining rather than just occupational switching. While encouraging people to consider shifting to green jobs, is an important aspect of green guidance, it is likely that only a relatively small element of the green transition is brought about by occupational change. Many people are likely to find that the way that they do their jobs will change, which will require flexibility and a positive attitude to training and retraining.

7. Green guidance should connect to wider frameworks for environmental and sustainability education. There has been a lot of thinking about how to address environmental issues through education. UNESCO's ESD agenda is at the heart of much of this thinking, but the EU's GreenComp approach is also worth engaging with. It is important for green guidance to actively engage with these agenda and use the space that they provide within the education system.
8. Green guidance needs to adopt a critical edge and recognise that existing policies around the green transition are insufficient. While existing public policy offers a major space for the development and practice of green guidance, it is currently insufficient to delivery its stated policy aims. Given this it is important that green guidance is able to help people to understand the limitations of the current policy and practice of governments, businesses and other key actors. It should also encourage people to consider the roles that they can play through work, learning and citizenship in addressing climate change through their career and empower them to take action.

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