

No just transition without skills

Skills for climate change policies

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voice for business

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ABBREVIATIONS

ALMPs	Active Labour Market Policies
ANDI	Asociación Nacional de Empresarios de Colombia
BUSA	Business Unity South Africa
CEDEFOP	European Centre for the Development of Vocational Training
EBMO	Employer and Business Membership Organisation
ESCO	European Skills, Competences, Qualifications and Occupations
EU	European Union
GAN	Global Apprenticeships Network
ILO	International Labour Organization
IOE	International Organisation of Employers
IRENA	International Renewable Energy Agency
MEDEF	Mouvement des Entreprises de France
MSME	Micro, small and medium-sized enterprise
NDC	Nationally Determined Contributions
OECD	Organisation for Economic Co-operation and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEVOC	Network affiliated to UNESCO on technical and vocational education and training
UNIDO	United Nations Industrial Development Organization
WBCSD	World Business Council for Sustainable Development

Context

The **COP27 Cover Decision** noted the importance of the transition to sustainable lifestyles and sustainable patterns of consumption and production to address climate change. It also mentioned the importance of pursuing an educational approach that promotes a shift in lifestyles while fostering patterns of development and sustainability based on care, community and cooperation. While the decision acknowledged and emphasised the need for stronger and enhanced climate action to minimise disruptions to social and particularly economic systems and ensure sustainable development, it also highlighted the difficulties of doing so in challenging regional and global contexts.

The impacts of climate change exacerbate the global energy and food crises, and vice versa, particularly in developing countries, so particular care is needed when implementing policies. The increasingly complex and challenging global geopolitical situation and its impact on the energy, food and economic situations, as well as the additional challenges associated with the socioeconomic recovery from the coronavirus pandemic, present a context not easy to navigate and one which should be accounted for when designing climate and skills policies. However, these elements should not slow climate action and coherent, appropriate policy frameworks that can strengthen and prepare national economies for future developments.

Unfortunately, the skilling and training agenda was not at the top of the priorities for COP27. Some organisations focused on the issue, as well as the wider agenda of education and climate-specific education. Still it was largely absent from the official negotiations and updated NDCs. The ILO is among those focusing on the issue of skilling and its importance for job creation and smooth transitions. It launched the **Green Jobs for Youth Pact during COP27**. The International Organisation of Employers (IOE) will closely monitor and engage in this initiative.

This IOE policy review takes a deep dive into the skills agenda as it relates to climate change policies and how governments and employers can strengthen readiness for some of the transformations already impacting many industries and sectors.

Introduction

The difficulty when discussing climate change and how to mitigate it is not to do with the 'why' but rather the 'what' and the 'how'. Concepts and terminologies are often still not very well understood and get updated, adapted and used in different ways, which can inherently be confusing for policy-makers who are not experts in the field, as well as for employers. A shared and common understanding of terminologies and concepts can lead to faster, more effective and efficient joint collective efforts on climate change-related policies.

Some common concepts and terminologies often used in discussions and reports are low carbon and net-zero economy, just or green transition, circular economy, phasing out or phasing down of fossil fuels, green skills and green jobs, and many more. The concept of *Just Transition* which is being promoted by the International Labour

Organization (ILO) is commonly used among ILO constituents. A ‘Just Transition’ means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. Please consult IOE’s **previous publications** (also **here**) for explanations of some of these concepts. It is also useful to consult the glossary of terms from the **Intergovernmental Panel on Climate Change** and the circular economy glossary from the **Ellen MacArthur Foundation**.

What are the skills for greening economies?

This paper, however, will look specifically at ‘Green Skills’ for jobs in the green economy. This is a term which is increasingly gaining popularity. However, there is no internationally agreed definition on ‘green skills’ to date. And it is difficult to make a distinction between “green” and “non-green” skills or jobs since it depends on many factors and discussions are still ongoing.

The EU through CEDEFOP¹ defines it as *‘those skills needed to adapt products, services and processes to climate change and the related environmental requirements and regulations’*.

For UNIDO², *‘Simply put, green skills are the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society.’*

Note: This definition is quite interesting as UNIDO does not just refer to knowledge and abilities but also values and attitudes. Indeed, skills development and mindset should go hand in hand when it comes to designing and implementing climate change policies.

According to UNEVOC network³: *‘Green skills are those skills needed to reduce environmental impacts and support economic restructuring with the purpose of attaining cleaner, more climate resilient and efficient economies that preserve environmental sustainability and provide decent work conditions’*.

The ILO refers instead to ‘skills for green jobs’. It is preferable to refer to *competencies - what individuals are able to do* - in order to be able to perform a job within a greener economy. More information on the ILO tripartite agreed framework for Just Transition can be found **here**.

An OECD forum⁴ of experts and policy-makers questioned the concept of green skills because current policy analyses lack a measurement framework to identify them coherently. For example, the **European Skills Agenda for sustainable competitiveness, social and resilience** proposes explicit targets about how to improve skills to facilitate the digital transition, while the plan for the creation of skills for the green transition remains vague, e.g. “defining a taxonomy of skills for the green transition”. This illustrates the importance of further working on this topic, developing

¹ <https://www.cedefop.europa.eu/en/keywords/green-skills>

² <https://www.unido.org/stories/what-are-green-skills>

³ <https://greenskillsresources.com/>

⁴ https://www.oecd-forum.org/posts/who-s-ready-for-the-green-economy-measuring-skills-for-the-low-carbon-transition?channel_id=791-inclusive-growth

shared understanding and flexible frameworks which make sense and correspond to reality. It is also about correctly identifying skills which are needed in different national contexts. Countries have different mitigation and adaptation priorities and objectives. Therefore, it is not just developing frameworks for skills development but also ensuring skills relevance to the national circumstances and anticipating the skills needs in this regard.

It remains to be seen if the concept of green skills will be a trending topic beyond COP27⁵. Regardless of the definitions debate, “green skills” as a concept can be ambiguous and difficult to measure. **The important question is whether countries are seriously integrating upskilling and reskilling programmes within policies to mitigate and adapt to climate change, and whether governments are making efforts to ensure that skills supply meet labour market demand in this area. This also involves reviewing and implementing skills development policies, particularly means for validation and recognition of skills and all forms of prior learning jointly by governments, social partners and training institutions at all levels. Finally, it is also important to analyse policies in the context of, and ensure coherence with, cross-cutting issues like the digital and automation transition and potential interactions and linkages between the two.**

Employment, skills and the green economy

- Globally, according to ILO projections - the **transition to green economies and actions to limit greenhouse gas emissions could create 24 million jobs by 2030**⁶. Others estimate this to be even higher. IRENA (International Renewable Energy Agency)⁷ found that accelerated uptake of renewable energy and energy efficiency measures could boost total clean energy jobs globally, from 11 million at the end of 2018 to 100 million by 2050. In a 2020 report, WEF⁸ suggested that if businesses prioritise nature in investments, nature-positive solutions can create 350 million jobs by 2030.
- “Green jobs”⁹, the new jobs that are created as industries and sectors transform, are a core outcome of green transitions; the ILO and UNEP¹⁰ found that **at least half the global workforce** - the equivalent of 1.5 billion people – would be affected by the transition to a greener economy.
- According to the ILO¹¹, the creation of over 100 million jobs in a circular economy and sustainability scenario, including both the successful reallocation of workers and the filling of new, additional jobs, “is entirely dependent on workforce access to training and related policy measures”. Upskilling and reskilling will be needed by ‘all sectors and at all levels in the workforce’. **Skills are one of the drivers to achieve a just transition to a green economy**, yet

⁵ For information, there are references to ‘blue skills’ which has to do with marine life and skills for employment in the marine career pathways in relation to the ‘blue’ economy.

⁶ <https://www.ilo.org/weso-greening/>

⁷ https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Feb/IRENA_Transition_jobs_2020.pdf

⁸ <https://www.weforum.org/press/2020/07/395-million-new-jobs-by-2030-if-businesses-prioritize-nature-says-world-economic-forum/>

⁹ Again the concept of “green jobs” has been rightly questioned, as it is technically difficult and could be counterproductive, from a “just transitions” perspective, to keep a rigid distinction between jobs that are “green” and other kinds of jobs.

¹⁰ https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_181836.pdf

¹¹ https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_709121.pdf

skills mismatches and shortages are among the key obstacles to green transition. For skills to become central in transitions – and in a green and just recovery from the global COVID-19 pandemic, the identification, anticipation and provision of green skills is crucial.

- It is of the utmost necessity to increase the awareness of job-seekers and current employees to invest in their own digital skills training and learning in order to be able to perform a job in a greener economy. There is an important role to play here for governments, employers and, employees to take action and proactively provide educational and skilling programs to help employees' skills stay relevant on the labour market. Research from Randstad points to a need to improve mindsets in enterprises and workers to adopt a more proactive approach in life-long learning and training. For example, during the COVID-19 lockdown, 7,314 of their flex workers were approached to take on a free training to ensure a smooth transition from work to work, from a decreasing to an increasing industry. Only 964 (13,2%) accepted this offer.
- According to the Green Economy Coalition¹², **few countries have yet reoriented their skills systems in line with their green ambitions.** Furthermore, only 40 NDCs out of 133 mention climate change education. A good sign, however, is that more NDCs (104) are referencing education and more NDCs (99) are referencing children and youth compared to the first round of NDCs. However, these references are often in very general terms and are much more likely to position young people as a vulnerable group than as agents of change. There is still less than half of all NDCs submitted so far that mention skills or training at all¹³. According to the most recent NDCs Synthesis Report¹⁴: Almost all Parties mentioned some or all means of implementation in their NDCs, although the structure and depth of that information varied significantly. There has been some progress in the NDCs since the ILO's 2019 report¹⁵ which observed that less than 40% of NDCs contain references to skills and human capital development. In the latest Synthesis Report, the share of Parties that referred to capacity- building in specific sections of their new or updated NDCs increased significantly compared with their previous NDCs, with the number of Parties indicating that capacity- building needs were mostly multisectoral having risen significantly. The number of Parties expressing capacity-building needs for adaptation also increased, this being the thematic area in which most capacity-building needs were expressed.
- LinkedIn¹⁶ (which has over 800 million members globally) highlighted that the share of green talent increased at a growth rate of 38.5%. For example, in the last five years, the number of Renewables & Environment jobs in the U.S. has increased by 237%, in stark contrast to the 19% increase for Oil & Gas jobs. At this pace, the Renewables & Environment sector will outnumber Oil & Gas in total jobs by 2023. The findings of its research include information on the fastest-growing green skills, which are in:

¹² <https://www.greeneconomycoalition.org/news-and-resources/are-skills-the-missing-piece-in-green-transitions>

¹³ <https://www.climatewatchdata.org/2020-ndc-tracker>

¹⁴ <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs/ndc-synthesis-report#Means-of-implementation>

¹⁵ https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_732214.pdf

¹⁶ <https://economicgraph.linkedin.com/content/dam/me/economicgraph/en-us/global-green-skills-report/global-green-skills-report-pdf/li-green-economy-report-2022.pdf>

- Ecosystem Management
- Environmental Policy
- Pollution Prevention

But the vast majority of these skills are being used in jobs that aren't traditionally thought of as "green" — such as fleet managers, data scientists or health workers.

Demand for 'green talent' will soon outpace supply. While job postings requiring green skills grew at 8% annually over the past five years, the share of green talent has grown by roughly 6% annually in the same period. Green skills intensity across sectors shows that corporate services, manufacturing, energy and mining, public administration, and construction are the sectors that use the highest number of these skills worldwide. This is why in addition to a focus on skills for the people who would need to fill those new "greener" jobs, it is also important to ensure that there are no workers left behind in other sectors of the economy. It may not necessarily be as straightforward as reskilling a coal miner into a windmill engineer. That may not be feasible due to the gap between the skill sets required, as well as potential geographical elements (the new jobs might not be at the same place as the old jobs). Instead, public institutions should provide effective policies (ALMP's, career guidance, etc.) specifically to support those in transition from existing jobs.

Furthermore, it is important for policymakers to assess and anticipate the types of jobs within the sectors which will be more impacted. These categories could include renewable energy, sustainable infrastructure, energy efficiency, plant based and alternative food products, and circular economy and green capture. Each country and sector are different however due to the different levels of development.

Challenges to skills development

There are many known challenges, depending on national contexts, on upskilling and reskilling the workforce for jobs in the green economy. To name a few:

- **Perceptions and understanding:** Climate change is not just about reducing emissions. It is also about knowledge creation, coordination and collaboration of policymakers with employers, workers and other stakeholders, and structural changes. The transition from fossil fuels means modernising transport, agriculture, manufacturing and power generation. Upskilling and reskilling efforts need to consider these various elements, starting with shaping perceptions and understanding what is needed to move forward and implement skills and climate policies
- **Right now there are considerable difficulties to achieve climate targets due to a lack of trained workers:** EuropeOn¹⁷ (an association at the EU level representing the electrical contracting industry) launched a #skills4climate campaign to raise policymakers' attention to intertwine skills and climate policies. The technical challenge lies in practical implementation, and this research focuses on a particular sector. Electrical contracting businesses are

¹⁷ <https://europe-on.org/skills-4-climate/>

already experiencing a shortage of both the overall workforce and skilled workforce, which are set to be exacerbated by the energy transition. Just on the European level: in Germany, 60% of electrical contractors have vacancies; in Sweden, installation companies are seeking to hire an estimated 28,000 workers in the next five years; while in the UK, electrical contractors will need 15,000 new apprentices, in addition to regular market intake, to cover the needs of the next five years.

- The ILO highlighted¹⁸ that the **green transition brings structural shifts in employment**. Therefore, this has implications for skills development strategies when sectors are continuously evolving. Sectors such as mining, fossil fuel-based energy generation, manufacturing (including the automobile industry), forestry and agriculture are likely to be most seriously affected by structural change in the wake of the green transition. Conversely, new job opportunities will arise in industries expected to grow as economies go ‘greener’. Consequently, coordination across macroeconomic, sustainable investment, industrial, sectoral, social and enterprise policies, will be also essential in enabling businesses to develop, implement greener and resource-efficient production practices, to align the supply of skills with growing demand and to facilitate smooth and efficient reallocation of workers to newly created green jobs¹⁹.
- Furthermore, the **skills required for changing occupations are hard to capture**. The ILO stated that ways of classifying and measuring these, and other skills required in greener jobs are only now being developed and refined. As a result, current labour market information is not up to date or appropriately organised. In the absence of reliable statistics, most countries have hitherto relied on qualitative data gathered through enterprise surveys, occupational research and/or consultations with experts. Policymakers developing skills strategies need to understand these structural and occupational shifts when designing policies to increase the chances of success during implementation.²⁰ The OECD also highlighted some specific challenges when it comes to SMEs²¹. Challenges for SMEs are linked to the following:
 - Limited resources
 - Inability to access finance
 - Market conditions (weak market demand)
 - Lack of access to skills
 - Lack of access to knowledge assets
 - Poor infrastructures
 - Heavy financial and human resources burden of greening
 - Lack of incentives through institutional and regulatory frameworks
- Women and girls are key players, and closing the STEM gap can support climate action. OECD research²² suggests that women are more action-oriented and solution-driven regarding climate change. A study conducted

¹⁸ https://www.oitcenterfor.org/sites/default/files/file_publicacion/meetingskillsneeds_greenj.pdf

¹⁹ https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_860617.pdf

²⁰ The interlinkages with digital skills and automation should also be taken into account as these are already strongly impacting labour markets and creating powerful trends in ways of working and necessary skills. Randstad has analysed some of the existing skills gaps and mismatches and highlighted the importance of monitoring frameworks, anticipation and planning (<https://workforceinsights.randstad.com/thank-you-randstad-global-labor-shortage-and-skills-mismatch-position-paper?>).

²¹ https://www.oecd.org/greengrowth/GGSD_2018_SME%20Issue%20Paper_WEB.pdf

by the **Women's Forum**, which surveyed nearly 10,000 people across the G20 countries, found that women — more often than men — changed their behaviour to decrease their carbon dioxide emissions by recycling, buying local, and reducing water and meat consumption. In Canada, several studies have demonstrated that girls/women are more likely than boys/men to believe that climate change is a serious problem and feel a deeper sense of urgency for action. In the largest public opinion survey conducted on climate change, the **United Nations Development Programme (UNDP)** surveyed 1.2 million people from 50 countries and found that Canada had the largest gender gap in perceptions of climate change. Canadian women and girls surveyed were 12 per cent more likely to rate climate change as an emergency than men and boys. **Women continue to be clustered in historically undervalued jobs**, such as childcare and clerical work and are under-represented in “non- traditional” sectors like STEM. Similar to the skilled trades sector, there are well-paid jobs in STEM, but **women and girls remain underrepresented in the sector globally**. Despite having the education to enter these sectors, women remain on the sidelines. Therefore investing in STEM education, training and skills development for women and girls would be critical, and at the same time, mindsets and behaviours at the societal level need to change as well.

- There are also various discussions in relation to the concept of maladaptation (adverse effects of climate adaptation). In other words, on the road to a just transition, it is crucial to always ask questions about whether a measure - such as manufacturing a bike to reduce carbon emissions by motor vehicles - shifts a physical or existential issue to another group of people or the environment. Another example could be: Building a dike in one village might prevent flooding in the first village, only to direct hazard to another community in another village. Hence, a holistic strategy is needed to ensure adverse effects of climate adaptation are minimized.

- **Some of the challenges of the Paris Agreement²³:**

- **Skills references in NDCs**

Countries which are signatories committed to meet the agreement's main aims, through various means, including NDCs. The Paris Agreement does not prescribe the exact nature of the NDCs. At a minimum, they should contain mitigation provisions, but may also contain pledges on adaptation, finance, technology transfer, capacity building and transparency. There is no mechanism to force a country to set an NDC target by a specific date or to meet their targets. The number of Parties expressing capacity-building needs increased, particularly in the context of adaptation. However, it is still the case that **only some mention a social mechanism for job creation, skills development and employment policies**, and a consultation process for social protection. With a view towards COP27, the Adecco Group **has assessed** the latest NDCs of the G20 countries. The picture was clear: skilling and employment policies are insufficiently addressed and prioritised in the G20 climate responses.

²² <https://www.oecd-forum.org/posts/gender-equality-for-a-sustainable-tomorrow-how-closing-the-gender-gap-can-support-climate-action>

²³ https://en.wikipedia.org/wiki/Paris_Agreement

Just 40% of G20 economies acknowledge the need for skilling as part of their climate transition plans, while an even smaller percentage (15%) identify ALMPs as a necessary field of action. These numbers do not exclude that countries may have some skilling or labour transition policies in place; just that up- and reskilling is not a priority tool to many countries. This vastly underestimates the challenge as predictions show that in the coming 10 years 7 million unsustainable jobs will disappear and 71 million jobs will need to transform for any just green transition to succeed.

- Climate change and skills in young people

Youth are increasingly becoming climate-conscious, aspire to have jobs with an impact and are involved in discussions and planning for climate action. A global survey²⁴ found that only one in three young people (29%) aged 15 to 30 feel competent in the skills they believe are needed to do jobs that tackle climate change, with young women feeling less competent than young men. In addition, there are two aspects which can potentially derail their aspirations – firstly, dream jobs require matching skills. Secondly, depending on the region, there are widening gaps between the offer and demand for “green” skills. It is, therefore, imperative that “green skilling” and education are put on a fast-forward mode along with matching creation of newer and futuristic jobs in sync with green economy. As mentioned earlier, not enough NDCs integrate education and skilling considerations and frameworks in their climate action and planning.

Existing research and analysis on skills frameworks

Many international and regional organisations are engaging and developing guidance, policies and research on topic of skills, training, education in the context of climate change policies.

The EU has an important flagship initiative called the European Green Deal²⁵. Activities will be carried out in various areas: climate, energy, agriculture, industry, environment and oceans, transport, finance and regional development, research and innovation. In summary, it plans to improve the well-being and health of citizens and future generation by providing:

- fresh air, clean water, healthy soil and biodiversity
- renovated, energy efficient buildings
- healthy and affordable food
- more public transport
- cleaner energy and cutting-edge clean technological innovation
- longer lasting products that can be repaired, recycled and re-used
- future-proof jobs and skills training for the transition
- globally competitive and resilient industry

In reference to skills development, the EU Commission has come up with a taxonomy of skills²⁶ for the green transition. This is a classification system of skills for the green transition in European Skills, Competences, Qualifications and Occupations

²⁴ <https://plan-international.org/news/2022/08/15/young-people-unprepared-jobs-green-economy/>

²⁵ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

(ESCO). **It includes 381 skills, 185 knowledge concepts and 5 transversal skills considered most relevant for a greener labour market.** Examples of ‘green skills’ include how to conduct energy audits, measure the sustainability of tourism activities, as well as training staff on recycling programmes. Examples of ‘green knowledge’ concepts include emission standards and ecological principles. ‘Green transversal skills’ include, for instance, the evaluation of the environmental impact of personal behaviour and the adoption of ways to boost biodiversity and animal welfare. The taxonomy contributes to a common understanding of which skills are needed for a successful and fair green transition in the labour market. ESCO provides information on which skills and knowledge concepts are essential or optional for specific occupations. In this way, it helps identify green elements that should be part of vocational education and training (VET) programmes preparing for these occupations. For example, ESCO demonstrates how conducting energy audits is a ‘green skill’ that is essential for occupations such as those of energy analysts and energy assessors, while it is optional for some other occupations, such as those of marine engineering drafters or vessel engine assemblers. Therefore, the taxonomy of skills for the green transition is an important point of reference when it comes to making VET fit for a greener future. It is more important to use and convert the taxonomy as guidance and inspiration, and to use this in mapping the futureproof skills needed for employees. The challenge now is how we quickly embed and harmonise what we know in green economy to the VET and higher education systems.

The OECD also has developed expertise on green skills and (in summary) have proposed the following recommendations for policy-makers²⁷:

- Supporting green skills is integral to the transition to a low-carbon economy (including its identification, assessment and creation)
- Optimising public policy direction for coordination and institutional integration is key for the transition
- Fostering portable skills and lifelong learning among all relevant actors: employers, workers, education institutions and governments at local, regional and national levels
- Matching market development to regulatory activity (Public policy action can drive green skills and jobs demand by increasing environmental standards and regulations at the same time as stimulating new markets)
- Focusing on transparency around policy action
- Developing strategic capacity within micro, small and medium firms
- Investing in R&D for anticipating and addressing gaps in knowledge

The ILO’s conclusions and recommendations, as outlined in the *2019 Skills for a Green Future: A Global View* report include the following:

²⁶ <https://ec.europa.eu/newsroom/empl/items/741088/en>

²⁷ https://www.oecd.org/cfe/leed/Greener%20skills_Highlights%20WEB.pdf

1. The green transition can generate millions of jobs, but these are condition on the availability of relevant skills and training.
2. Policies have developed since 2011 but remain fragmented.
3. Improving governance mechanisms will support better coordination and reduce skills mismatches.
4. Lower-income countries face particular challenges like affordable and accessible finance, particularly challenging demographics with large youth populations and a lack of capacity for training and skilling, agricultural sectors with many workers who are not ready to transition into other jobs, and high levels of SMEs operating at the local level who do not have the capacity or adequate support to engage.
5. Higher-income countries need to re-energise their efforts on greening jobs and skills.
6. Labour market intelligence and skills anticipation should enhance understanding of changing skills demand in the green transition.
7. Countries need to mainstream skills for greening jobs in their systems and make these skills better recognisable.
8. To seize the momentum, countries will need to integrate forward-looking skills strategies in their climate and environmental policies.
9. Social dialogues will remain part and parcel of ensuring the relevance of education and training and for achieving just transition for all.

Some employers' organisations and companies are also dealing with climate change from the skills agenda perspective:

- MEDEF, IOE's member from France, is actively engaged in climate action and has been working with its company members on different elements of this policy area for some years. It has **published a report** on the employment implications of the green and digital transitions and a **flagship project** is focused on training, education, and skilling of workers within companies.
- **ANDI**, IOE's member from Colombia, is one of the more advanced EBMOs in the context of climate, biodiversity, and sustainability action. They have established a **Protocol of Good Practices** for skills development and regularly engage in discussions on the topic. Beyond hosting the GAN Colombia satellite, and coordinating several projects in biodiversity and circular economy, they are involved in many projects with local communities and have participated in several sessions of ILO International Training Centre's training courses.
- **BUSA**, IOE's member from South African, is a key partner in the country's **Just Transition Partnership** and has launched a **research project** analysing the employment and skills impacts of a phase-out of the national coal industry.

- CII, one of IOE's members from India, has **longstanding experience** engaging in skills activities which they are now adapting to focus on green skills as well. They publish a yearly report on skills challenges and progress in India, manage a Committee on skills and livelihoods with regular discussions, and deliver guidance, training, and other services through many vehicles like career centres, assessments, international coordination and regional institutes.
- Companies like the **Adecco Group, Deloitte, LinkedIn, Holcim Lafarge, Mahindra, Volvo Group, Qalaa Holdings, Sasol** and many others are taking the challenge seriously and anticipating emerging skills gaps and workforce transformation through research, training schemes, investments, technology development, capacity-building and knowledge sharing.
- Some private foundations are advocating for change and carry out their respective missions to increase awareness among students and the general population on climate change and how we can mitigate it on a daily basis:

Mohammed VI foundation²⁸ is a foundation for environmental education. More than 1.12 million eco-students have participated in its Ecocoles programme, more than 34,000 college and high school students taking part in the Young Reporters for the Environment competitions and 30 beaches now labelled blue flag in Morocco. Tools to raising awareness among students, policymakers and the general public include pedagogical tools, webinars, publications and events. The Foundation also works with UN agencies such as UNDP, UNESCO, UNEP, FAO and ECOSOC.

What governments should do in anticipating skills for a greener economy.

All the data points to an increasingly urgent shortage of skills for jobs and tasks necessary for decarbonisation, therefore, Governments, in collaboration with the private sector, need to act now: it is important for governments to consider linking skills and education policies to climate change and environmental policies. These policies should no longer work in isolation, as they are highly linked to the economy, productivity, sustainable development and climate change mitigation. Furthermore, inter-ministerial coordination across relevant ministries for the effective design, planning, implementation and evaluation of policies on skills development for climate action needs to be strengthened and made more coherent.

Taking into account the complexities in anticipating skills in greener jobs, offer skills identification and anticipation tools to stakeholders: there are some skills which are easier to anticipate, such as in the Energy Sector, but less common and less straightforward in, say, corporate services. How do we promote skills in this area? What kind of skills will be needed in the short and medium term? Some skills such

²⁸ <https://fm6e.org/en/lafondation/>

as sustainable waste management and electricity consumption management are perhaps quick wins, but how do companies decarbonise in practical terms? Even with the growth in analytical models and approaches to assess the skills needs of green transitions, there are systemic challenges to promoting the right skills²⁹. These include: the interlinked nature across sectors and industries creating bottlenecks and dependencies, a lack of structures to deal with green skills as a cross-cutting concern in the education and training landscape, a lack of education and training opportunities and dated curricula in education and training institutions.

Link skills policies with climate change and environmental policies: Labour market analysis instruments do not capture occupations that will be under threat or transformation due to climate change and related policies. For the most part, there is a disconnect between skills and environmental policies. There needs to be a skills-based approach in these analyses to tackle climate change issues. Few countries have yet reoriented their skills systems in line with their green ambitions³⁰, but some, like France,³¹ are putting in place dedicated frameworks.

Develop and promote learning resources. Some public agencies work with private enterprises on the creation and development of learning resources, which are accessible online. These learning resources are helpful as they can help students understand the consequences of their actions and other factors on the environment. However, these learning resources are limited due to lack of investments, effort and time on developing these resources. How do teachers teach these skills to the future generation of students? It is difficult to teach something so diverse and complex, without the necessary learning resources.

Invest in education and skills development for jobs in the green economy. Education is a powerful means of spurring behavioural change and collective action, cultivating skills, ensuring a just transition to a sustainable economy, and building communities' adaptive capacity. This is an area where national authorities have to take the leading role but there is a strong potential for public-private partnerships, close collaboration with the private sector and employers' organisations through the development of dedicated frameworks, training programmes, apprenticeships and employment schemes. Offering education is important, but often not enough in isolation. There is a need for proper career guidance, ideally in collaboration between public and private providers. It has been shown that career guidance can help uptake of training as well as improving labour market outcomes for the individuals involved³².

Increase the capacity for MNEs and MSMEs to promote a change of mindset of all individuals, and offer advice and capacity-building to assist in company policies. As mentioned earlier, skills development and having the right mindset and attitudes go hand in hand. Without the right attitudes towards mitigating climate change, it would be difficult to implement the new skills that have been learned, or why there is a need to learn them in the first place. On company policies, policy-makers should offer tools on how to measure CO₂ emissions and other related climate action measures, as well as dedicated support frameworks, in collaboration with employers' organisations,

²⁹ https://www.ilo.org/skills/pubs/WCMS_607491/lang-en/index.htm

³⁰ https://www.ilo.org/skills/pubs/WCMS_607491/lang-en/index.htm

³¹ <https://www.ecologie-gouv.fr/observatoire-national-des-emplois-et-metiers-leconomie-verte>

³² <https://info-lhh.com/ch-career-guidance-download>

which provide training, guidance, capacity-building, and tailored, ready-to-use solutions for small companies.

Develop technical skills for critical sectors through proper planning: Certain sectors produce similar products and services and, therefore naturally face similar challenges when it comes to skills development and capacity building. Sector-based action plans can help pave a clear and coherent way at a systemic-level for joint action towards a common goal.

Adequate incentives to SMEs: SMEs particularly need adapted support, incentives and frameworks which allow them to transition and follow regulatory and policy developments as well as facilitated access to financing. This should not be an agenda of the developed economies. Developing country companies that trade with developed countries should also be given the opportunity and time to develop their operational capacities and not be disadvantaged on the pretext of not meeting climate targets. There should be incentives and programmes to promote capacity building or pooled services for SMEs and thus, ensuring an equal playing field for all companies. Furthermore, access and affordability of finance is a crucial issue for SMEs and developing as well as emerging economies which requires more work from international stakeholders as well as local authorities.

Create an enabling environment for business to grow, thrive and innovate using clean technology. Skills development programmes can be offered by governments to upskill and reskill workers on the use of new technologies and methodologies. Most importantly, this enabling environment includes, and is not limited to, promoting stronger labour market institutions which can help encourage systematic social dialogue among national constituents and take measures to tackle corruption and bureaucratic bottlenecks and red tape. The pervasive issue of informality would also require the attention of policy-makers. Facilitating a smoother transition of workers from the informal sector to the formal one would be a golden opportunity in the country's journey to a greener economy.

Four recommendations for EBMOs regarding skills and climate change

These policy recommendations are crafted with EBMOs, multinationals and also micro, small and medium enterprises in mind, in all regions. Furthermore, it is important to note that this complex transition is not occurring in isolation from other global trends and potential transformations, megatrends such as automation, urbanisation, electrification, population growth and globalisation.

1. Be aware and engage in policy discussions on climate change. Be the medium and facilitator as the business voice linking public and private sectors. This means allocating the necessary human resources to deepen knowledge and expertise on the latest national policy developments on climate change and skills. This also means trying to participate and share the voice of the business when invited to policy dialogues. EBMOs need to raise policy-makers' attention on the need to intertwine skills and climate policies in order to ensure a smooth and efficient transition for countries and businesses. Employers need

to change mindsets and enhance the attractiveness of technical education, persuade governments to analyse the skills gaps in their labour markets and set-up knowledge sharing and collaboration channels.

2. Provide information on climate change and environmental policies to members and company partners as a service and value proposition.

This is an opportunity to offer (new) services and attract new members to join employers' organisations, as it will offer guidance and practical recommendations to companies on how to navigate through changing regulations and policy environments.

3. Leadership through company skills policies: SMEs need tools to anticipate the skills they need from the workforce. EBMOs need to ask themselves, 'How can SMEs decarbonise?' 'Are there readily available skills anticipation tools out there where employers and workers can help measure CO2 emissions and how to offset emissions?' 'Which specific part of the company can we use to promote sustainability?' 'Can we do it systematically on procurement policies and travel policies for instance?', etc. SMEs do not have many options nor resources on the 'how' so it would be important for EBMOs to offer technical advice and guidance which builds up skills in local businesses.

4. Consult experts at IOE for technical advice or networking opportunities for peer-to-peer sharing of best practices: Members and company partners of IOE have access to sources, access to other experts at the regional and national levels and offer a platform for exchange of ideas and best practices on greening skills development and policy implementation.



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