



Our World, Our Work

Accelerating Youth Jobs and Inclusive Green Economies:

Elements for Reflection and Discussion

EDC

Education
Development
Center

"Greening the economy is a human capital issue."

—Global Green Skills Report 2022



Our World, Our Work is a 10-year initiative that seeks to accelerate youth employment and self-employment in the green and blue economies. Initially spearheaded by Education Development Center (EDC), this initiative is convening leading stakeholders to promote a just, more inclusive, green economic transition while also addressing the employment crisis faced by large numbers of youth around the world.

Our goal is for 1 million young people (60% young women) between the ages of 18 to 30 to be employed or self-employed in decent, inclusive, sustainable green and blue jobs over the next 10 years.

This discussion paper offers a set of reflections on the key issues related to the intersection of climate change, the green and blue economy, and youth employment. It offers a set of discussion questions related to youth's participation in the green and blue economy and their leadership in a just transition.

A Paradigm Shift

Climate change is creating massive transformation of the global economy that will revolutionize the future of work. Employment estimates suggest that while the transition to a green economy will create job losses in carbon-intensive industries, the net effect on job numbers will be positive when offset by the [100 million new job opportunities](#). In total, the International Labour Organization (ILO) estimates a [net increase of at least 18 million jobs](#) from the transition to clean energy and an additional 7 million jobs from the circular economy.

Tackling climate change requires us to change the entire way we think about and do business—changes to the way we design, the way we produce, the way we deliver, and the way we consume different goods and services. Every job will soon be considered a “green job.” For example, conventional agriculture is starting to give way to more sustainable practices such as [urban agriculture](#), [marine-based renewable energy](#), [sustainable coastal tourism](#), and [nature-based solutions](#), such as [zero-waste agriculture](#), agro-forestry, silvo-pastoral systems, and mangrove restoration efforts. In the green building sector, construction managers need new skills for green building projects, such as complying with green building standards, preparing cost estimates, and ensuring a recycling plan for materials on the site. In solid waste management, innovative public-private partnership models are leading to [youth-led micro-franchises](#) for household waste collection and separation and the [creation of new value chains](#), such as organic fertilizer made from compost or [innovative building materials](#) made from recycled thin film plastics.

Changing Skills Demands in the Green and Blue Economy

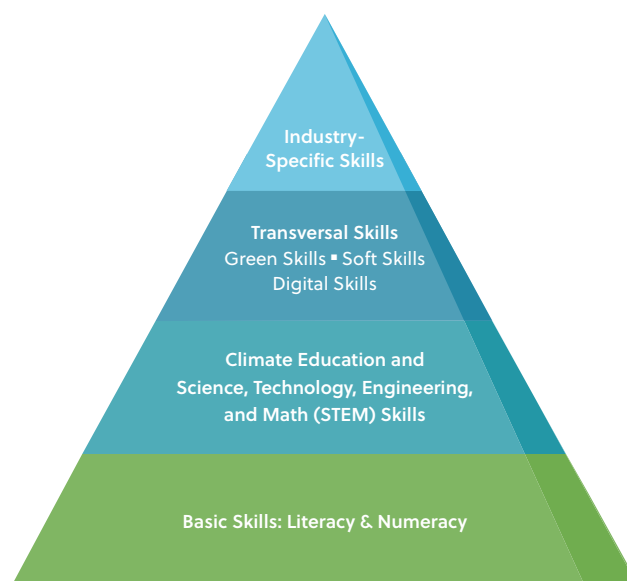
Our global workforce needs the right skills to lead this transformation. Employment projections suggest that the demand for skills will vary based on the economic context, the nature of the sector, and the maturation of the sector. On one side, the ILO estimates an overall growth in [employment opportunities that favor low- and medium-skilled workers](#). Much of the literature suggests that low- and medium-skilled jobs in the green economy are [similar to those in traditional industries](#), requiring only some specialized training in new skills and practices. For example, biofuel producers need workers with basic reading, writing, communications, math and computer literacy, with some industry-specific training. The role of [technical and vocational education](#)

[and training](#) (TVET) institutions will be increasingly important, as will the need for certification programs in these emerging occupational skills.

On the other side, energy-intensive and more developed economies should expect a [larger share of jobs in professional and associate professional occupations and corporate managers](#), and a need for [highly skilled green jobs particularly in the short-term](#). For example, across [Indonesia's renewable energy sector](#), new jobs are calling for high-level skills, including project development (project planning, project finance, data analysis); system design and planning (engineering design and drawings, procurement, logistics); system planning and grid management; information technology; and regulatory and public policy skills. The [construction sector](#) is experiencing a high demand for designers and planners, such as architects, engineers, and urban planners, who understand measures for energy efficiency, water conservation, and waste reduction. Similarly, lead firms in the manufacturing sectors currently need [sustainability managers](#) to work up and down their value chains to adopt more circular practices.

In addition to industry-specific skills, the circular economy calls for a broad set of [transversal skills](#) (see [Figure 1](#)). Fundamental to these skills is ecological literacy—a [green lens for every job](#) in which existing

Figure 1. Green Jobs Skills Requirements for a Just Transition



curriculum embed and update skills training to include energy and resource efficiency, the reduction of environmental pollution and waste, and compliance with environmental legislation and standards.

Moreover, as the private sector adopts more circular practices, workers will need adaptability and transferable soft skills to learn and apply new technologies and processes. A 2022 skills report by the Singapore Government highlights a [high demand for environmental and sustainability management skills](#), noting that they are “highly transferable as these skills are required across a wide range of industry sectors, from accountancy to hotel and accommodation services, infocomm (sic) technology, engineering, and transport-related sectors.”¹ Moreover, given that digital technologies are key to reducing energy consumption and waste, closing the skills gap in the circular economy will require an [increased need for digital skills](#). In this rapidly changing world of work, we will fundamentally have to change the way we learn: skills attainment will not stop at compulsory education but rather should be treated as a lifelong process.

As part of this [new green learning agenda](#), [climate change education](#) and focus on science, technology, engineering, and math (STEM) will be important long-term investments, starting at the primary and secondary levels and into higher education. [STEM skills for girls and young women](#), in particular, should be a focus of education reform efforts, particularly for lower-secondary levels and into higher education where gender gaps widen, as well as for leadership development and mentoring opportunities for women in the STEM fields.

“Nothing for Us, Without Us”: Youth, Women and Indigenous Communities at the Forefront of a Just Transition

Looking at this landscape, these changes have a high propensity to further widen the wealth gap and disenfranchise vulnerable groups, including out-of-school youth, women, and the poor. For example, in Indonesia, which is the seventh largest producer of coal, a total decarbonization plan expects new renewable energy jobs to outweigh coal jobs at a

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ratio of 6 to 1 throughout the country. Climate change mitigation efforts could result in [proportionally fewer employment opportunities for women](#), as employment gains are likely to be seen in currently male-dominated industries, such as renewable energy, manufacturing, construction, science, technology, and engineering fields where women are underrepresented. The role of [cities](#) will play an important role in the just transition: today over half (56%) of the world’s population lives in urban areas, and [by 2050, 70% of people will live in cities](#).

Even more importantly, today’s young generation is the largest the world has ever known. Sub-Saharan Africa, in particular, will double its population by 2050 and will be the youngest continent in the world. Tackling the massive green growth challenge requires the talents, perspectives, and assets of young people, including women and indigenous people. Youth have proven that they [challenge world leaders](#) in powerful ways; they are [more likely to engage in climate activism](#); many [aspire to obtain a green job](#); and many are driving innovations through [social enterprises](#).

Aligning Labor Supply and Demand in the Green and Blue Economy

Education and training providers are important channels for empowering young people and other vulnerable groups. However, most education systems are already strained and [slow to respond](#) to the changing demands of the green and blue economy. Some of the education challenges are a result of low institutional capacity and a lack of faculty development, which particularly in TVET institutions leads to a dependence on the private sector to teach green content. A lack of certification systems and green skills standards have further slowed the progress of skills upgrading, particularly in low- and middle-income countries (LMIC).

¹Skills Future Singapore. (2022). Skills demand for the future economy, (p. 16). <https://www.skillsfuture.gov.sg/skillsreport>



Governments need to work closely with education and employment actors and the private sector to align policies and programs with changing global, national, and local economies. Although [less than 40% of Nationally Determined Contributions \(NDCs\) include plans for skills training](#), a small number of countries have prioritized employment and skills development as part of their NDCs. Cambodia, Dominican Republic, Colombia, and Argentina are [ranked high for NDCs that are committed to climate change education](#). In the Philippines, which established a [Green Jobs Act](#) in 2016, the Technical Education and Skills Development Authority has generated a [labor market intelligence report](#) that details the skills demand and curriculum needs in the renewable energy sector.

International development actors can also promote education solutions that build the foundations for youth leadership and activism. A number of multi-lateral organizations have invested in the [greening of TVET](#). The U.S. Agency for International Development (USAID) is investing in [higher-education institutions in Central Asia](#) and in the [Young Southeast Asian Leaders Initiative](#) to promote climate change education, youth leadership, and youth activism. The United Nations Environment Programme (UNEP) has harnessed the power of technology to develop a platform for [massive open online courses](#) that include curricula on green jobs for youth; meanwhile, the Voices of Youth, sponsored by UNICEF, offers [online tools for young climate activists](#).

Government Actions for Green Job Growth

But policies and programs will need go well beyond skills development to also include investments and incentives that promote inclusive green job growth—growth that includes and promotes youth-owned enterprises in countries with a [large informal economy](#). Surprisingly, an [OECD survey](#) (Organisation for Economic Co-operation and Development) revealed that only 60% of countries had taken at least one measure to grow the green economy, and most of these countries had only introduced training programs. But several bright spots are emerging. In Indonesia's East Kalimantan region where coal production is phasing out, the provincial government is instituting [policies to diversify the local economy](#), such as tax holidays, reductions to land and building taxes, and import facilities; meanwhile, it has initiated training and apprenticeship programs to help workers shift to non-coal jobs. In Bangladesh, the government is promoting [better environmental management practices in the fire brick kiln industry](#), which pollutes 17% of the nation's emissions but also employs roughly 1 million people in the informal sector.

The Role of the Private Sector in Driving Green Job Growth

Meanwhile, in the private sector, technological progress is creating a stronger business case for companies to leapfrog into the green and blue economy. For example, in the construction sector, [green buildings offer investors a more attractive return on investment than conventional buildings](#), as they have higher asset values, a reduced risk of becoming a stranded asset, reduced building costs, and reduced operating costs. Similarly, industry leaders in the agro-food system can offer value-added with [digital traceability across the agro-food and fisheries supply chains](#), which can attract financing (by offering investors a more accurate risk assessment); bring down the costs along the value chain (by reducing food losses/waste); and increase the value-added of products that are guaranteed to be sustainable. In the apparel sector where labor productivity is a key factor for production, the [Sri Lankan apparel manufacturer, Brandix Group](#), provides on-the-job training for all employees in clean technology, environmental awareness, wastewater management, and solid waste management through reuse or recycling.

To date, many of the greening efforts have remained with larger lead firms and have yet to take off with smaller enterprises, especially those in the informal sector in LMIC. The development of inclusive financing instruments has the potential to reduce investment risks and accelerate youth-led green and blue social enterprises. Examples include [eco-credit](#) lending products that build sustainable practices into loan terms for traditionally “un-bankable” small-scale producers, group-based lending to cooperatives or associations, digital and AI-based approaches to [mobile credit scores](#), or inclusive grants funds such as the [Small Grants Program \(SGP\)](#) established under the UN Global Environment Facility. As early as 2012 the Government of Rwanda established a [Rwanda Green Fund](#), which has so far raised USD 247 million for climate change grants, seed capital, and credit lines, and has [new plans](#) to raise an additional USD 100 million for private sector green projects.

Building Green Enterprise Capacity, Setting Standards

Although the business case is often clear for the early adopters, in developing countries most micro-, small- and medium-sized entrepreneurs have relatively little knowledge of the benefits of going green, nor the capacity to do so. Global private and public actors can play a crucial role by building capacity for scalable climate solutions and ultimately by mobilizing capital for innovation and investment in these contexts. The [Alliance to End Plastic Waste](#), for instance, focuses on de-risking and demonstrating solutions to advance a circular economy for plastic waste as a means to catalyze further investment, replication, and scaling. Meanwhile, an array of sector-specific policy guides, training programs, certification programs, and sustainable finance instruments are being introduced by industry associations such as the [World Green Building Council](#), the [International Solid Waste Association](#), and the [Global Sustainable Tourism Council](#). A just transition will ensure

that these kinds of programs are able to reach not only the top lead firms but also smaller enterprises in underserved areas. Moreover, businesses that seek sustainable financing will increasingly be held to more rigorous standards for sustainability, which are now being established by a number of sustainable finance organizations such as the [International Capital Markets Association](#), the [Climate Bonds Initiative](#), and [Science Based Targets](#), and the [Transition Pathway Initiative](#). There may be a role for donor-funded programs to underwrite the costs of verification systems for smaller businesses and underserved entrepreneurs who seek to verify their sustainability practices.

Labor Market Data and Market Intelligence

From the standpoint of translating green jobs policy into practice, inadequate labor market information remains a stumbling block for governments, education institutions, and job-seekers alike. As a first step, the ILO has developed working definitions of “green jobs,” a [tool for quantifying national-level employment](#) linked to green growth, and a [guide for anticipating skills needs for green jobs](#) in developing countries. In turn, its Green Jobs Assessment Institutions Network (GAIN) has developed a [training guidebook for conducting national green jobs assessments](#), which to date have helped 14 countries measure and model employment outcomes of climate policies.² While these high-level assessments help governments to set national policy, a greater level of locally contextual data is needed for local governments to direct local resources and for education institutions and employment programs to develop appropriate curriculum and services for their local labor markets. In the Philippines, through the [USAID-funded Opportunity 2.0 activity](#), Education Development Center and Accenture Development Partners are working to improve local labor market information on green and blue employment demand trends in select provinces.

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² Green jobs assessments have been completed in Turkey (2022), Zimbabwe (2021), Nigeria (2021), Tunisia (2018), India (2018), Uruguay (2016), the Philippines (2014), Mexico (2014), Mauritius (2012), Gaza Strip (2012), Lebanon (2011), Bangladesh (2010), China (2010), and Brazil (2009).

Conclusion

This discussion paper raises several key considerations as well as bright spots that will catalyze transformation of the green and blue economy:

- + Young people are an important part of growing the green and blue economy; however, **they need access to skills, resources, and networks** to contribute in a meaningful way.
- + A just transition means that the future workforce will carry a diverse array of skills, ranging from industry-specific skills to transferrable soft and green skills to fundamental climate change education and STEM education, particularly for girls and young women. This dynamic has implications on education systems in the short- and long-terms. Countries need to re-imagine the way that education is delivered: education is about lifelong learning, and **young people need continuous pathways for building their skills** upon one another and for adapting over time.
- + While over the past decade countries have predominantly focused on national-level policies and practices to drive green job growth, the time is now to take advantage also of bottom-up opportunities and bright spots—**to meet young people where they are at and magnify their successes**. In particular, there is an untapped opportunity to take advantage of the will and resources of local governments and the private sector to drive changes in their local communities.
- + **Young people are eager to engage** in climate activism and to solve global problems with their innovations.
- + **Access to labor market information and market data is critical** for countries to implement a just transition, across all sectors, and at all levels.
- + Young “green-preneurs” need a **conductive enabling environment and incentives** to take risks and to innovate. Both the public and private sectors offer a number of green enterprise capacity-building opportunities; these need to reach young people to have any sustained impact.



Questions for Reflection

Linking Supply and Demand: How can we better connect the skills of young people with the demands of green and blue industries across all skill levels?

- + What are ways to enable governments to prioritize climate change education and green skills development at scale, for example, in secondary education versus TVET versus higher education?
- + What are the opportunities and barriers to engaging the private sector in green and blue upskilling and re-skilling at scale, particularly in LMIC where there are weaker concentrations of lead firms?
- + Given the number of existing resources and curricula developed by multi-lateral institutions, industry associations, and others, what are cost-effective ways to adapt and deploy curricula at scale? How do we ensure that they are appropriate to the local context and to different young learners?
- + What are cost-effective ways to assess skills requirements?
- + What are examples of governments that have developed effective systems for generating and sharing labor market demand data and skills requirements? To what extent are these models replicable for LMIC?
- + How can public-private partnerships best be scaled to result in more responsive skills development?
- + How can we equip educators to teach competencies required for green jobs?
- + To what extent can distance learning and information and communication technology (ICT) help bridge the gap between supply and demand? What are the trade-offs?

Youth-Inclusive Investment and Financing: What is needed to catalyze investment in green and blue industries that are inclusive of youth?

- + What are the high-priority financial products and services that young men and women need most to engage effectively in the green and blue economy?
- + What are the major entry points for different youth segments to access financing? What's working well, and what's missing vis-à-vis youth-inclusive sustainable financing?
- + What are the major constraints that financial institutions face in extending finance to youth in the green/blue economy, and what is the role of private and public entities in lifting such barriers?
- + What needs to happen to better prepare young people to be eligible for and successfully manage finances?
- + What are some solutions to risk management for financial institutions that could be built upon, both in terms of credit risk of young entrepreneurs and credit risk associated with sustainable financing?
- + What are examples of digital efforts by which ICT is opening up access to financial services of young entrepreneurs and to enterprises in the green/blue economy?

Questions for Reflection

Mobilizing the Talents of Youth: How can we leverage the leadership talents of youth to ensure just and sustainable economic transformations and shifts in parental and community attitudes?

- + What are the different ways young people can drive green job growth, both as leaders and as participants?
- + What are the different entry points (municipal, subnational, national, international) by which youth can amplify their voice and engagement in the green jobs and just transition movement?
- + How should policies and programs be adjusted so that they adequately prepare young people to be part of the climate change dialogue and to be leaders of climate action; for example, training youth to be negotiators, activists, etc.?
- + What are the salient barriers that young people face in acting as forces for change and innovation, and what are proven ways to overcome such barriers?
- + Thinking about youth leadership from an entrepreneurship perspective, how conducive are market systems for youth leadership and participation? What are the opportunities, and what are the constraints?

Moving from Policies to Implementation and Learning: What is needed to help country governments shift from declarations to implementation, and how can we fill evidence and knowledge gaps?

- + In spite of the initial policy push over the past decade, by and large change is happening slowly and not felt at local levels. The examples in this discussion paper highlight some bottom-up approaches to drive green job growth. How can these bright spots be magnified and scaled across countries, within countries (to local levels), and across sectors?
- + What are the key priorities and possible levers for increasing subnational capacity so that local governments are mobilizing and implementing policies at the local level?
- + What are ways to propel the dissemination of industry information and labor market data in LMIC, so that lead firms, entrepreneurs, policymakers, and the public make informed decisions in support of green job growth?
- + Is there a sufficient case to be made to concentrate green growth efforts in cities? Why or why not?
- + To what extent can the generation and dissemination of data help propel policies and programs? How do we make labor market information and awareness of opportunities that exist more accessible to young people?



For further information on the OWOW initiative,
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