

Green jobs are booming, but too few employees have sustainability skills to fill them. Four ways to close the gap

January 6 2023, by Christopher Boone and Karen C. Seto



U.S. universities now have over 3,000 sustainability programs. Credit: Andy DeLisle/ASU

To meet today's global sustainability challenges, the corporate world needs more than a few chief sustainability officers—it needs [an army of employees](#), in all areas of business, thinking about sustainability in their decisions every day.

That means product designers, supply managers, economists, scientists, architects and many others with the knowledge to both recognize unsustainable practices and find ways to improve [sustainability](#) for the overall health of their companies and the planet.

Employers are increasingly looking for those skills. We analyzed job ads from a [global database](#) and found a tenfold increase in the number of jobs with "sustainability" in the title over the last decade, reaching 177,000 in 2021.

What's troubling is that there are not enough [skilled workers](#) to meet the rapid growth in green and sustainability jobs available.

While the number of "[green jobs](#)" grew globally at a [rate of 8%](#) per year over the last five years, the number of people listing green skills in their profiles only [grew by 6%](#) per year, according to a LinkedIn analysis of its nearly 800 million users.

As professors who train future workers in sustainability principles and techniques, we see several effective ways for people at all stages of their careers to gain those skills and increase those numbers.

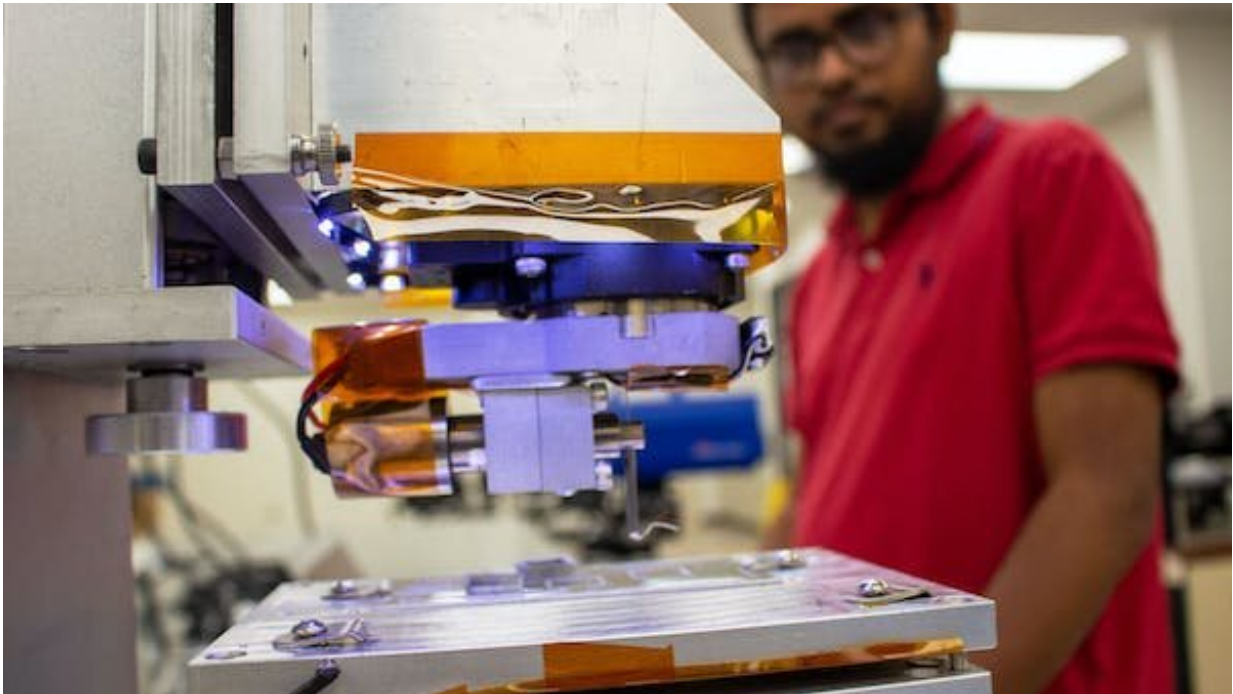
Where sustainability jobs are growing fastest

In the U.S., jobs in the [renewable energy and environment sectors](#), [grew by 237%](#) over the last five years. Globally, the transition from fossil fuels to [renewable energy](#) is forecast to result in [a net increase in jobs](#) for the energy sector.

But green jobs go well beyond solar panel installation and wind turbine maintenance.

Sustainable fashion is one of the fastest-growing green jobs sectors,

averaging a [90% growth rate](#) annually between 2016 and 2020.



When employees are trained to think about sustainable materials and processes, they can improve corporate innovation and the bottom line. Credit: Sona Srinarayana/ASU

The rapid expansion of ESG investing—environment, social and governance—and portfolio management is opening up new jobs in sustainable finance. In 2021, the accounting firm PwC announced that it would invest US\$12 billion and create [100,000 new jobs](#) in ESG investing by 2026.

There is also a growing demand for urban sustainability officers who can help transition cities to be net-zero carbon and more resilient. After all, the world is adding [1 million people to cities every five days](#) and [building 20,000 American football fields' worth of urban areas](#)

someplace on the planet every day.

In 2013, when the Rockefeller Foundation [launched 100 Resilient Cities](#), a network to help cities become more sustainable, few cities had a resilience or sustainability officer. Today, more than 250 communities and 1,000 local government professionals are part of the [Urban Sustainability Directors Network](#).

The number of companies with [chief sustainability officers](#) in executive positions also [tripled](#) from 9% to 28% between 2016 and 2021. But given the [scale and business opportunities of sustainability](#), these skills are needed much more widely within organizations.

So, where can you find training?

Most sustainability and green jobs require creative problem-solving, synthesizing and [technical skills](#). Some of those skills can be learned on the job, but boosting the number of qualified job applicants will [require more effective and accessible training](#) opportunities that target employers' needs. Here are a some training sources to consider.

University programs: Sustainability is increasingly being incorporated into a wide range of university programs. Fifteen years ago, sustainability training was mostly ad hoc—a product designer or economist might have taken a class in sustainability approaches from the environmental science department. Today, U.S. universities have [about 3,000 programs](#) with a "sustainability" label, up from 13 in 2008.

A National Academies [report](#) recommends looking for a competency-based approach to sustainability learning that blends content with skills and links knowledge to action to solve problems and develop solutions.

Micro-credentials: For mid-career employees who [don't have the time](#)

to reinvest in full-fledged degrees, short courses and micro-credentials offered by universities, colleges or professional groups offer one way to develop sustainability skills.

A micro-credential might involve taking a series of courses or workshops focused on a specific skill, such as [in wind energy technology](#) or [how to incorporate ESG criteria](#) into business operations.

Some of the fastest-growing green jobs globally

Many of the fastest-growing green jobs from 2016 to 2021 require both creative problem-solving and technical skills.

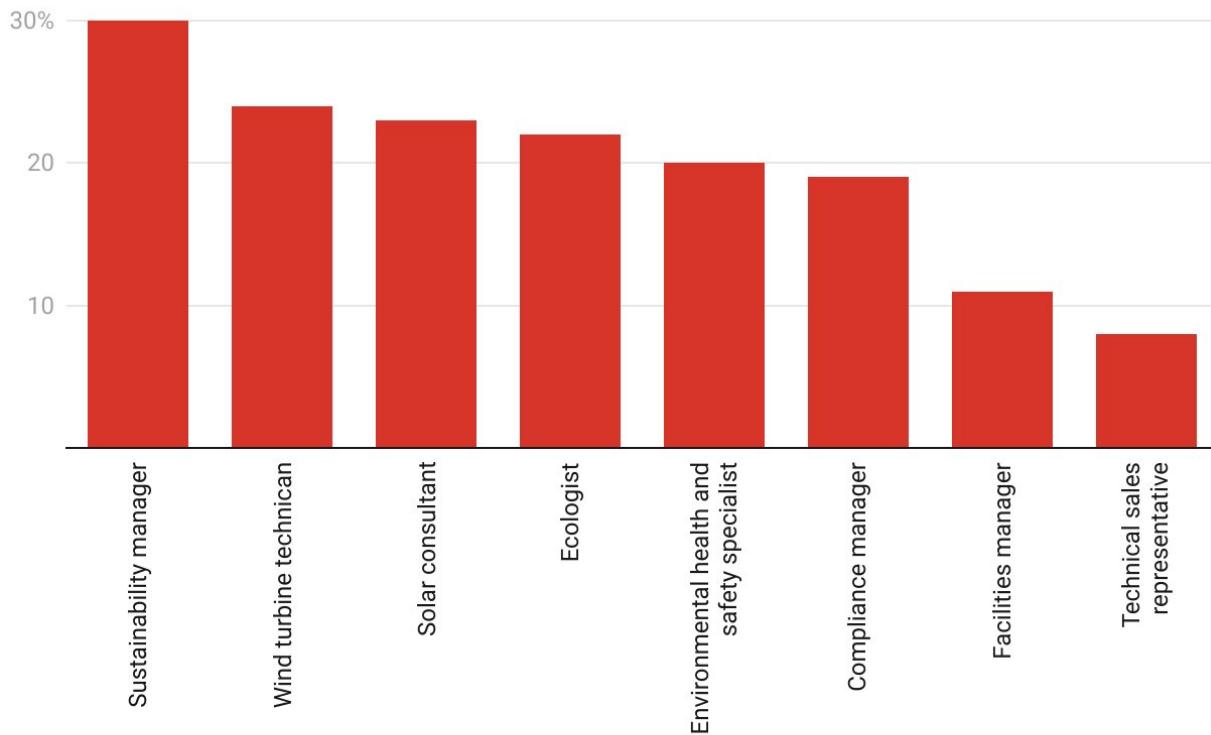


Chart: The Conversation/CC-BY-ND • Source: LinkedIn Global Green Skills Report 2022 • Created with Datawrapper

Credit: The Conversation

Short courses and micro credentials take up less time and are much less expensive than college degree programs. That may also help [lower-income individuals](#) train for sustainability jobs and diversify the field.

Specializations: A similar option is jobs-focused online certificate programs with a sustainability specialization.

For example, Google teamed up with universities to provide online courses for project managers, and Arizona State University is offering a [sustainability specialization](#) to accompany it. Project management is an area where the [U.S. Department of Labor](#) expects to see fast job growth, with [100,000 job openings](#) in the next decade.

Corporate training: Some companies have developed their own internal sustainability training in [climate science](#), [sustainable finance](#), [sustainability reporting](#) and other skills.

Integrating sustainability across all functions of companies will require some level of sustainability training and understanding for most if not all employees. Companies like [Starbucks](#), [HSBC](#), [Salesforce](#) and [Microsoft](#) have created internal training programs to spread sustainability knowledge and practice throughout their companies, not just for employees who have sustainability in their titles.

Closing the gap

A recent [survey by Microsoft and BCG](#) of major companies found that only 43% of sustainability professionals in businesses had sustainability-related degrees, and 68% of sustainability leaders were hired internally.

It's clear that on-the-job sustainability training and up-skilling will be necessary to fill the growing number of roles inside of companies.

To meet the sustainability skills gap, we believe more training will be required—at colleges and universities, by professional organizations and from employers. Achieving global sustainability and meeting climate change challenges will become more likely as legions of people commit their working hours to sustainability solutions.

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