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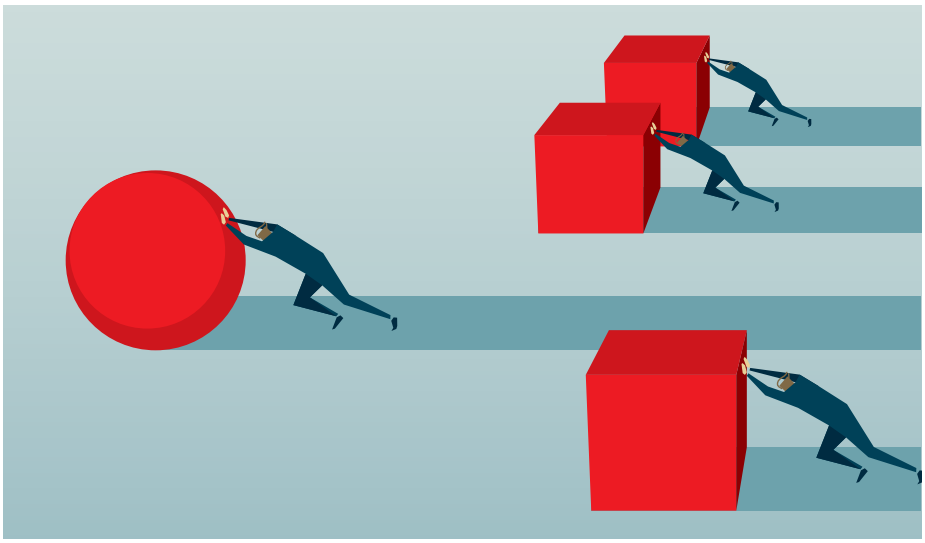
Careering ahead

Societal transition to address climate change will require many changes. As society adapts and transforms, the labour market will be altered as some established areas of employment will disappear and new areas will emerge that will need workers.



The green transition is under way. Ambitious climate targets require a reduction in fossil fuel consumption and a move to more sustainable ways of living. This means that employment in the future could look very different; as technology advances, new jobs are created and others are made redundant, and climate change also requires adaptations in the workforce.

But what this future workforce will look like and where those jobs will be located is unclear. The World Economic Forum's *Future of Jobs Report*[1] shows that the green transition is driving the biggest investments that will result in job creation, with other increases related to digitization and technology, but in certain sectors, such as agricultural technology, advances will displace employment[1].

Green jobs were defined by the United Nations Environment Programme in 2008 as "work in agricultural, manufacturing, research and development (R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality [...] this includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency strategies; de-carbonize the economy"[2]. We are already seeing an increase in these roles and they will grow as the green transition continues. For example, it is expected that jobs related to fossil fuel extraction and processing will be lost, while there will be job increases in the low-carbon energy and construction sectors, as well as in sustainable transport. There is also expected to be an increase in the number of sustainability experts who will track and advise businesses and governments, for example, on their environmental impact and ways to minimize it.

In this issue of *Nature Climate Change*, an Article examines the specifics of such a green transition and its impact on employment in the US. Judy Jingwei Xie and colleagues look at this labour market and find that decarbonization of the electricity sector would see the creation of more than 450,000 new jobs by the 2040s. However, while most states will benefit from the decarbonization there are states that rely more on mining and will see reduced employment opportunities, in particular, lower-skilled workers will have fewer opportunities. The accompanying News & Views article by Greg Muttitt and Philip Gass discusses how policymakers need to consider these geographical changes, but also whether the created jobs are equivalent to those lost, a consideration for a just transition.

Further to the shift to low-carbon energy jobs, and other areas that are already emerging, there will be jobs required that we cannot imagine now. In recent years, roles have been created in response to climate change impacts that were unlikely to have been predicted many years ago. For instance, the role of a chief heat officer has been created, tasked with protecting urban residents from extreme heat, through a unified approach. This role that was created as a pilot in 2021 can be found in a number of cities around the world, including the first African chief heat officer in Freetown, the capital of Sierra Leone[3]. With an increase in extreme events, and the need for adaptation to protect lives and infrastructure, there will be other similar roles required.

Climate change and technology are changing society, but societal change is essential and it is important to ensure that these transitions are handled in a just and equitable manner.

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