

## IPRC BRIEF 4 : 2026

# Green Jobs in the Red Dot: Singapore's Green Economy Ambition



## EXECUTIVE SUMMARY

In this brief, we discuss Singapore's approach to climate change mitigation and the development of its green economy, particularly focusing on its efforts to create green jobs. By most measures Singapore is a highly successful economy with one of the highest GDP per capita in the world. However, the city state remains extremely vulnerable to climate change risks being a low lying island with high annual rainfall. Thus we explore Singapore's twin objectives to mitigate these risks while also developing the economic opportunities that arise from decarbonisation and climate adaptation. The brief examines the institutional, social, and labour market drivers shaping Singapore's approach to green job creation, highlighting equity and justice considerations within a developed economy context. We note that the country's high reliance on low wage migrant labour combined with an ageing demographic, challenges the country's aspiration to lead an inclusive green economy.

## THE HEADLINES

1

Singapore aspires to be a regional leader in the 'Green Economy' for environmental and commercial reasons.

2

Singapore is extremely vulnerable to climate change risks, but its efforts to build a 'green economy' are challenged by its continued reliance on low wage labour and an ageing domestic workforce.

3

Building an inclusive green economy in Singapore requires greater protection for temporary migrants and more incentives and training opportunities for older and younger Singaporeans to consider green careers.

## INTRODUCTION

What are 'green jobs'? How might this apply within the city-state of Singapore, which has evolved into a knowledge-based economy with a strong emphasis on professional employment opportunities? How can recent developments in regard to the country's green jobs creation initiative be assessed via the themes of equity, justice, and inclusion? Our recent peer-reviewed journal article<sup>1</sup>, published in *Equality, Diversity and Inclusion: An International Journal*, set out to explore these very questions. The research underpinning this article was motivated by several factors. For instance, the greening of economies and employment opportunities has become a pressing matter worldwide given the climate crisis and its social, economic, and political fallout. Collaborative work between international agencies and advocacy bodies, such as the United Nations Environment Programme (UNEP) and the International Labour Organization (ILO), has been instrumental in supporting governments worldwide as they have developed policies on green economies and jobs. From a scholarly standpoint, much has been written about the green economy, but the notion of green jobs has remained under-researched and largely avoided critical scrutiny. This provided the wider justificatory context for the article.

The greening of Singapore's economy can be traced back to the efforts of its founding leaders and post-independence development agenda. Various policies have been legislated since the 1990s, and in February 2021, the Singapore Green Plan 2030 was announced by the government. This resulted in a rather intensive focus on developing green jobs in the country (along with jobs in the digital and care industries), which has in turn been underpinned by specific workforce transformation mechanisms (eg. the SkillsFuture program). State intervention has therefore been significant, and from a certain angle, the country's green plans can be characterized as a wide-scale, national change process that is targeted at shaping mindsets and behaviours as much as it is about transforming the types or forms of labour that are available to be performed. We found a paucity of research on this context in general, and particularly, in terms of the implications for Singapore's green jobs creation drive on the matters of equity, justice and inclusion. We would argue that these are pressing matters for consideration, especially as the country has in recent decades had to navigate several socio-economic challenges (eg. workforce demographics, an ageing population, falling fertility rates) despite its economic gains.

This provided further justificatory context for our research and the article. In the remainder of this brief, we discuss some of the key findings pertaining to green jobs and green employment prospects in the Singaporean context.



## UNDERSTANDING 'GREEN JOBS' IN THE SINGAPORE CONTEXT

The concept of 'green jobs' emerged approximately in the late 2000s through grey literature published by several advocacy agencies<sup>2</sup> and in tandem with some of these organisations' work on the green economy<sup>3</sup>. Overall, our research revealed several characteristics of the topic. First, the 'green jobs' concept has been relatively under-researched and less scrutinized in academic discourse, even while opportunities for critique are identifiable. For instance, even though the grey literature on green jobs is characterized by themes of equity, justice, social dialogue and inclusion, the case for such employment tends to also be underpinned by a 'transformation of work' thesis that is managerialist and technocratic in orientation. Moreover, as some critical researchers<sup>4</sup> have highlighted, the concept can be attractive to politicians for its convenience in simultaneously addressing issues that would have relevance to a wide range of stakeholders. Overall, however, the discourse on green jobs does raise important questions about the future of work in the context of the ongoing climate crisis, hence it would appear a balanced research program is warranted.

Second, the term has been defined very widely in the grey literature and whatever academic research that does exist. To some extent, a wide definition is necessary to accommodate

contextual differences across different nations, but there is nonetheless some acknowledgement by certain advocacy agencies that conceptual ambiguity can impede policy development and practice<sup>6</sup>. Accordingly, the foregoing points suggest the need for further academic research on 'green jobs'. Potentially, this may involve drawing on areas of study that already have sufficient conceptual infrastructure (eg. work in contemporary society, decent work, or meaningful work).

Third, green jobs are linked to several other terms or concepts, such as 'green skills', 'just transition', and 'decent work'. One that potentially exacerbates the problem of conceptual ambiguity is 'shades of green'. According to the advocacy agencies, green jobs can be positioned on a spectrum ranging from light to dark green, depending on their environmental benefits or the extent to which they represent decent work. Light green activities are reactive in nature, and include pollution or waste control, while dark green activities are more preventive and include those that stop pollution and/or provide comprehensive worker protections.

Given the nature of the Singaporean economy, professional roles have been especially emphasized by the government. For instance, in its most recent report, SkillsFuture Singapore<sup>6</sup> has highlighted sustainability management and engineering skills as being especially pertinent for developing the country's green economy. To this end, roles in the areas of facilities management, business consulting, project management and environmental engineering have been emphasized. Expertise in sustainability assurance has also been prioritised as organisations increasingly need to meet compliance requirements and demonstrate their commitment to protecting the environment. To support these workforce transformation efforts, the SkillsFuture initiative has emerged as a complex and somewhat unwieldy range of career development and training schemes that serve Singaporean residents with differing needs. Training providers have also become a key element of this provision, which has led to the emergence of the adult education sector as a 'cottage industry' with private businesses competing alongside higher education institutions to support the transformation efforts.

## **SOCIO-ECONOMIC CHALLENGES TO SINGAPORE'S GREEN ECONOMY AMBITIONS**

Singapore's economy relies extensively on migrant labour in most of its key sectors and at different skill levels, ranging from unskilled to skilled and those employed in 'knowledge' work and professional services. As reported by Singapore's Ministry of Manpower in December 2024, the country had a total of 1,576,500 migrant workers of different visa types – work permits, 'S' Passes, Employment Passes – which stands at about a quarter of the country's population of 6 million and generally represents an increase from the numbers reported two years earlier<sup>7</sup>. Most migrants, however, are low wage, temporary workers concentrated in the construction, marine and engineering sectors.

The ambition to build a modern green economy is challenged by this reliance on low wage temporary labour in two ways. First, the inequality these workers experience is increasingly amplified by climate change. Many of these workers perform their duties outdoors and are therefore exposed to excessive heat stress and health risks<sup>8</sup>. The Ministry of Manpower has attempted to address this via the introduction of a national framework for managing heat stress at workplaces but it is unclear what level of compliance has been achieved. Second, the dependency on low wage labour acts as a disincentive for employers to invest in the training and technology required for the skilled blue-collar jobs needed to power the green economy. This produces skills shortages which are unlikely to be filled by migrant labour or citizens and permanent residents.

Exacerbating skills shortages in Singapore's green economy are changes in the demography of Singapore. Singapore has a rapidly ageing population where it is projected that by 2030, one in four Singaporeans will be over the age of 65<sup>9</sup>, compounded by falling fertility levels. The ageing of the core workforce comprised of citizens and permanent residents along with falling fertility rates, further increases employer dependence on temporary migrant labour, hence the disincentive to invest in 'green skills'

We argue there is an unrecognized opportunity (and a critical need) to diversify green job holders by involving more older workers and as well as younger Singaporeans in the green economy.

Although it has an ageing population, Singapore is regarded as an emerging 'blue zone' where life expectancy is high and growing by international standards<sup>10</sup>. Therefore, more older Singaporeans could be re-trained and given the means to take up green jobs while still enjoying a decent retirement.

There is a similar opportunity to entice younger Singaporeans into green jobs despite some cultural challenges. Academic research for example has identified several problems relating to youth employment in the Asia-Pacific region and Singapore specifically<sup>11</sup>. This includes a general reluctance of younger Singaporeans to consider careers in what is perceived to be vocational or blue-collar employment. However, part of this reluctance is again linked to the high dependency on temporary low wage migrant labour that serves to reduce the incentive for younger Singaporeans to enter these occupations. If green jobs are low wage, without career paths or training opportunities, younger Singaporeans will naturally be deterred from considering a future in the green economy. Thus ensuring an inclusive green transition which targets support for younger, older, and mid-career workers as well as protections for migrant labour is critical for the success of the green economy in Singapore.

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