

Jordan wants green jobs – but what counts as green?

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Key messages

- Green jobs in Jordan are concentrated in three occupations — protective services, auto mechanics, and construction tiling — which together account for 75% of all green employment. Green employment builds on existing trades and infrastructure, not new high-tech sectors.
- Green employment is accessible to young, less-educated workers: 15% of workers aged 15–34 hold green jobs, and 84% of green workers have not completed secondary education. Green occupations provide formal contracts and social security at higher rates than non-green jobs.
- Green jobs do not pay more on average, but they compress wage inequality. Workers at the 10th percentile of the wage distribution earn 28% more in green jobs than comparable non-green workers — a premium worth 61 JOD per month, over 60% of Jordan's poverty line.
- Women are almost entirely excluded from green employment: only 3% of female workers hold green jobs compared to 13% of men. The ten largest female-employing occupations all have zero green task content.
- Green employment concentrates in rural northern governorates (Ajloun 28%, Mafraq 21%, Jarash 18%) while Amman — home to the largest workforce — registers only 7%.

Green jobs in Jordan are not what most people imagine. They are waste collectors, auto mechanics, construction tilers, and environmental inspectors — workers in existing trades, not new high-tech sectors. These jobs do not pay more on average, but they lift the wages of the poorest workers by 28%, compressing inequality from the bottom. Yet green employment largely bypasses women and concentrates in rural governorates far from Amman, where most Jordanians live and work. This brief uses the 2025 Jordan Labor Market Panel Survey to map who holds green jobs, what they earn, and what stands in the way of inclusive green growth.

Policy Problem

Jordan's Economic Modernization Vision (EMV) 2022-2033 sets ambitious goals: strong job creation, economic growth, higher living standard, and sustainability. The Green Jordan driver, alongside with the Jordan Green Jobs Initiative, aim to align green employment with broader sustainable development goals and better economic opportunities for Jordanians across skill levels and geographical locations (Government of Jordan, 2022). However, delivering such ambitious goals requires understanding what are green jobs in Jorda, who hold them, and whether they provide the socio-economic benefits policymakers expect.

While international frameworks on green jobs and findings from other developed countries provide some guidance, Jordan faces a distinct set of constraints: an energy- and water-scarce economy (World Bank, 2022) with one of the lowest female labor force participation rates in the world (World Bank, 2023), acute youth unemployment, and a labor market reshaped by the large influx of Syrian refugees (Fallah et al., 2019) and the possibility of future return migration. Therefore, one cannot assume the characteristics exhibited by green jobs in other countries will necessarily apply to Jordan.

Jordan's high youth unemployment and climate vulnerability create both urgency and opportunities for understanding and developing green employment strategies. Recent evidence demonstrates that extreme weather events disproportionately harm low-income households, while climate adaptation and mitigation investments can generate employment for workers whom the traditional sectors underserve (Triyana et al., 2026). This brief examines whether green jobs in Jordan deliver both inclusive and sustainable growth. The analysis shows that while green jobs reduce income inequality for the bottom 10% workers by lifting earnings by 24% compared to non-green workers. However, because the characteristics of green jobs in Jordan, this effect remain concentrated in specific occupations and regions and largely bypass women.

Research and Method

This brief the 2025 Jordan Labor Market Panel Survey (JLMPS), the first wave to include a dedicated green task module, to investigate the prevalence, characteristics, and wage returns of green employment across Jordan's workforce. The analysis employs two complementary measures: the Green Task Index (GTI), a continuous occupation-based score developed by (Granata & Posadas, 2024) and adopted by the World Bank and International Monetary Fund for cross-country analysis, and self-reported green tasks captured through the survey's dedicated module.

These approaches capture fundamentally different workers, with near-zero correlation or overlaps between them – a pattern consistent with the wider literature where green job estimates range from below 1% to above 20% depending on classification methodology (Apostel & Barslund, 2024). The occupation-based index identifies trades and manual workers such as automotive mechanics, construction tilers, environmental inspectors, while the survey module identifies workers reporting green activities regardless of their formal job classification, including policy analysts and building

maintenance staff. This brief uses the occupation based classification to be consistent with the World Bank and IMF standards.

Key Message 1: Green jobs in Jordan are concentrated in a few occupations – 75% of green employment is in protective service, auto repair, and construction

Green employment is not just solar panels and electric vehicles. In Jordan, it is waste collection, vehicle repair, construction, and environmental inspection. The concentration of Jordan’s green employment reveals both the practical nature of environmental work and the limits of conventional green economy thinking. A single occupational category — protective services workers in public administration — accounts for 40.4% of all green employment, reflecting Jordan’s substantial investment in environmental monitoring, waste management oversight, and public safety functions related to environmental hazards. Auto mechanics, who repair and maintain vehicles to extend their operational life and reduce emissions, constitute another 23.7% of green workers, while construction tilers, engaged in energy-efficient building and retrofitting projects, contribute 10.9%. Together, these three occupations represent 75% of all green employment, demonstrating that Jordan’s green economy builds on existing skills and infrastructure rather than entirely new industrial sectors (ILO and UNEP, 2008).

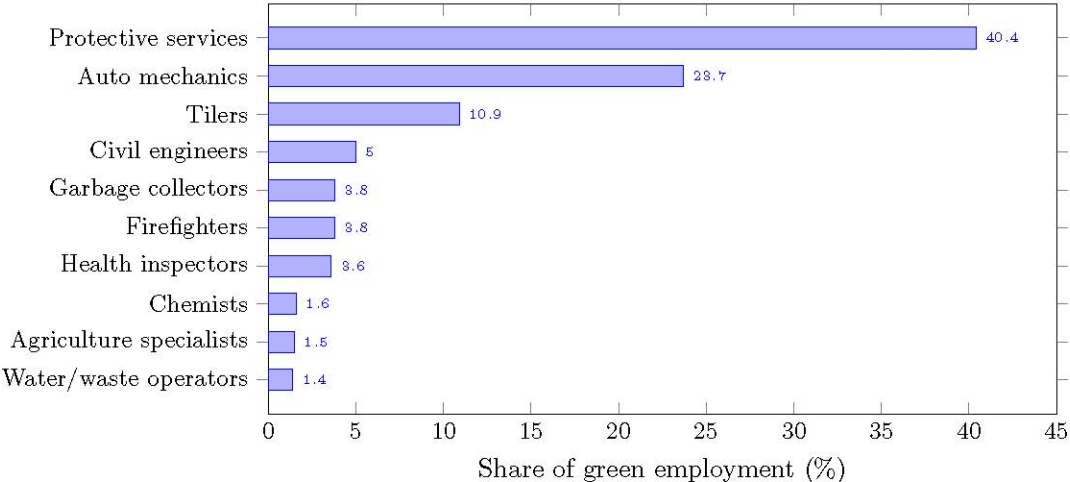


Figure 1: Top 10 green occupations by share of total green employment. Green occupations are occupations with Green Task Intensity > 0. Source: JLMPS 2025.

Yet the highest-paying green occupation — water and waste treatment plant operators, earning average monthly wages of 847 JOD — employs only 3,280 workers nationwide, representing merely 1.4% of green employment. Similarly, chemists, agriculture specialists, and other skilled green occupations each employ fewer than 5,000 workers. This pattern suggests that while Jordan has green employment for workers in traditional trades and public service roles, it has not yet developed large-scale opportunities for technically trained workers whose skills could drive the innovation and efficiency gains that are central to sustainable development.

Key Message 2: Green employment is accessible to young, less-educated workers who gain formal job protections

Jordan's green workforce challenges conventional assumptions about environmental employment requiring high levels of formal education. Green occupations exhibit a bimodal skill distribution internationally, concentrated in both high-skilled professional roles and in lower-skilled construction, maintenance, and trades occupations (Consoli et al., 2016). The educational distribution shows that green workers concentrate in lower levels of education attainment, with 44.8% having completed primary education compared to 33.5% of non-green workers, while 24.7% have incomplete secondary education versus 17.6% in non-green occupations. At the lower end, 7.4% of green workers have no formal education and 6.5% have incomplete primary education, compared to 5.5% and 4.9% respectively among non-green workers. Conversely, only 11.8% of green workers hold university degrees, substantially below the 28.6% of non-green workers with tertiary education, while 4.8% have completed secondary education compared to 9.9% of their non-green peers.

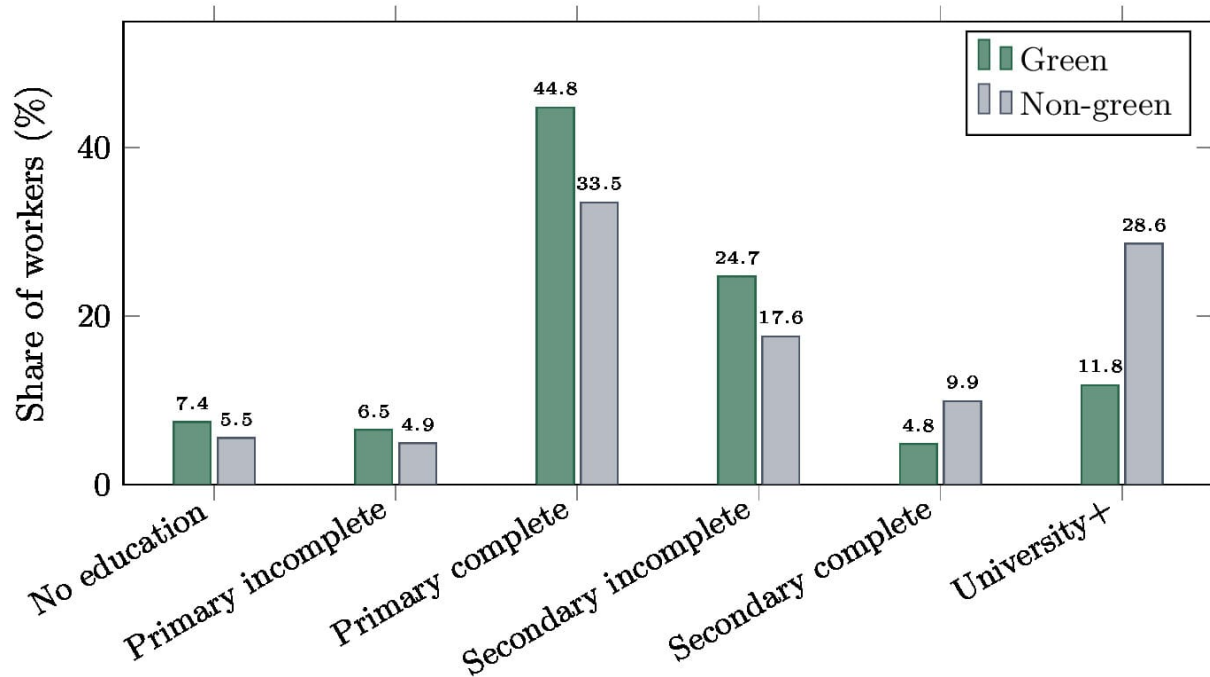


Figure 2: Education distribution of green and non-green workers. Green workers are concentrated in primary and lower-secondary education; only 12% hold a university degree compared to 29% of non-green workers. Source: JLMPS 2025.

Yet despite lower average educational attainment, green workers achieve higher employment quality across multiple dimensions that matter for economic security and social protection. Green workers average 35 years of age compared to 38 for non-green workers, and 84% have not completed secondary education, yet they enjoy better job quality than their educational profile might suggest. Some 68% hold written employment contracts compared to 62% of non-green workers, while 65% participate in social security schemes versus only 50% of non-green employees. Green occupations — trades, construction, protective services, and public administration — require practical skills and hands-on experience rather than academic credentials, creating structured pathways into formal employment for workers who lack the qualifications for white-collar work. International evidence suggests the green transition generate substantial employment in medium-skilled occupations, particularly in construction and manufacturing (International Labour Organization, 2018), and in Jordan these occupations appear to offer formal contracts and social security at rates above non-green employment.

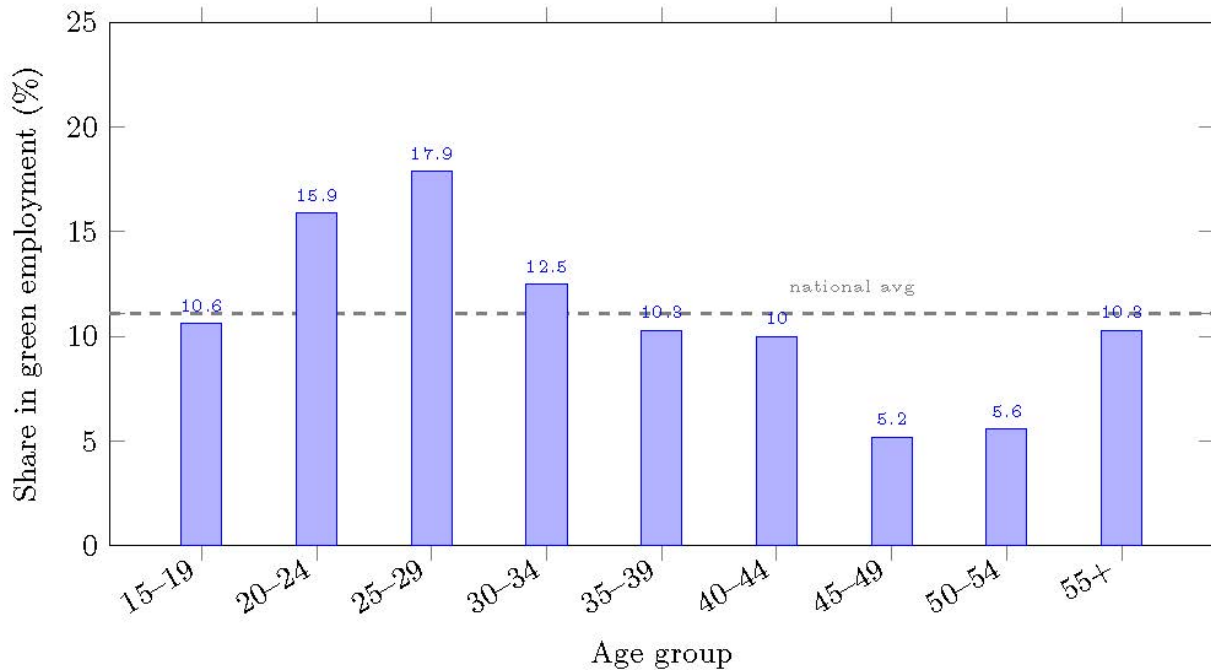


Figure 3: Age distribution of green workers. Green employment defined as occupations with at least one green task (Granata & Posadas, 2024). Dashed line marks the national average (11.4%). 55+ group ranges from 55-65 years old. Sample limited to working age population from 15 to 65 years old.

The age profile of green employment reinforces its potential as a policy tool for addressing Jordan’s youth unemployment crisis. Among workers aged 15-34, 15% of them hold green jobs compared with 5-7% after age 45, demonstrating that environmental occupations remain accessible to younger workers entering the labor market. International evidence suggest that younger workers are substantially more likely to move into green employment and the transitional rates fall steadily with each successive age cohort (Curtis et al., 2024). In a country where youth unemployment approaches 40% (World Bank, 2024), this demographic concentration represents a significant opportunity to channel green investments toward the population segments that traditional economic sectors fail to adequately serve, while simultaneously building the future workforce needed for Jordan’s environmental transition.

Key Message 3: Green jobs compress wages at the bottom — the poorest green workers earn 28% more

The relationship between green employment and wages in Jordan defies conventional wisdom about environmental jobs providing uniform benefits across the income distribution. In Jordan, green workers do not earn more on average than their non-green counterparts; controlling for age, education, gender, and industry, the mean green wage premium is 6% but statistically indistinguishable from zero. In Jordan, green jobs are not universally well-compensated relative to traditional employment. While Vona et al., (2019) find a modest green wage premium in US local labor markets, other evidence suggests the premium varies across contexts and that high-carbon jobs may pay substantially more than green jobs (Godoy & Isaksen, 2025). Any wage advantages must be examined at a more granular level to understand who benefits and under what conditions.

However, the statistically insignificant wage premium conceals the most significant finding of this analysis: green employment systematically redistributes earnings from the middle and top of the wage distribution toward workers at the bottom. Using unconditional quantile regression methodology developed by Firpo et al. (2009), this brief estimates the green premium at each point of the wage distribution to understand how environmental employment affects workers across income levels. The results show that while green jobs provide no wage advantage — and even carry slight wage penalties — for median and higher earners, they deliver substantial benefits to the lowest-paid workers, creating a mechanism for reducing wage inequality within Jordan's labor market.

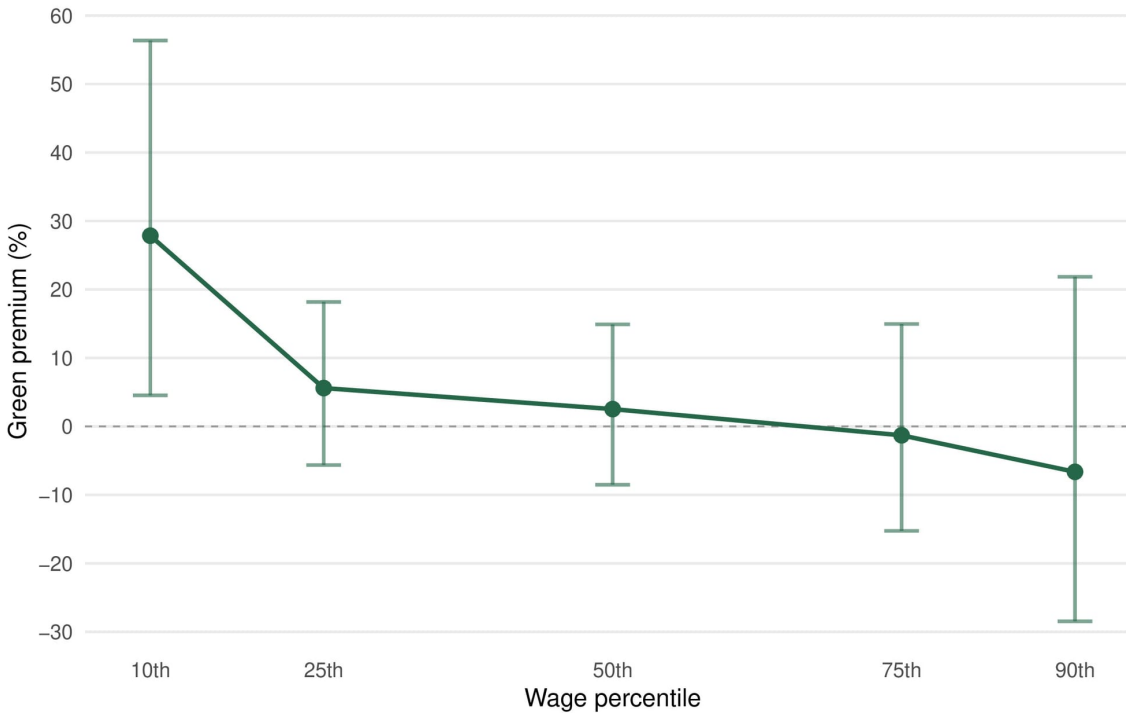


Figure 4: Green wage premium across the distribution. The premium is large and statistically significant at the 10th percentile (+28%) and vanishes at the median and above. Green jobs lift the wage floor without inflating earnings at the top. Source: JLMPS 2025, RIF-OLS estimates with occupation-clustered standard errors.

Green jobs lift the income floor more than they raise the ceiling. The poorest green workers — those at the 10th percentile — earn 28% more than comparable non-green workers. Given that the 10th-percentile wage stands at 217 JOD per month, that gap is worth 61 dinars: over a third of Jordan's poverty line of 168 JOD per person (Department of Statistics, 2023). Sixty-one dinars buys a family better food, a visit to the doctor, or a child's school fees.

The green wage premium fades above the 10th percentile – and may vanish entirely. At the 25th percentile, the estimated premium is 5.6%; at the median, 2.5%; at the 75th percentile, green workers appear to earn 1.3% less; and at the 90th percentile, 6.6% less. But none of these estimates is statistically significant. In plain terms, the data cannot distinguish them from zero — the apparent differences could easily reflect sampling noise rather than a real gap. Green jobs boost wages only for the lowest-paid workers; for everyone else, the evidence is too imprecise to draw conclusions.

Why the premium appears only at the bottom of the wage distribution remains an open question — the quantile regressions identify where green jobs pay more, not why. What the data do establish matters for policy: green employment raises wages for low-paid workers, the group least served by Jordan's labor market. If green investments expand, the lowest earners gain first. Green jobs lifts wages precisely where the labor force is most vulnerable and where climate shocks land hardest (Triyana et al., 2026).

Key Message 4: Women are almost entirely excluded from green employment

Green employment offers wage premiums and formal job security for lower-income workers, but it excludes two critical segments of Jordan's labor force: women and workers in the capital. Only 3% of female workers hold green jobs, compared to 13% of men. This pattern mirrors international findings: globally, men hold close to two-thirds of green positions, and in advanced economies green jobs account for over 20% of male employment versus 6% of female employment (Alexander et al., 2024). The gap does not reflect wage discrimination — women in green occupations earn comparable wages to men — but occupational segregation that concentrates women in sectors with zero environmental task content. The ten largest occupations employing women in Jordan — teachers, policy analysts, domestic cleaners, pharmacists, office cleaners, shop workers, data entry clerks, and secretaries — all register GTI scores of zero. Women in Jordan do not work in waste management, vehicle repair, construction, or firefighting, which constitute the core of current green employment.

This segregation reflects deeper structural constraints. Women's employment in Jordan concentrates heavily in education, administration, and service roles (World Bank, 2023), while trades, construction, and technical occupations — where green task content concentrates — remain almost exclusively male. Cultural norms, family responsibilities, and workplace policies all contribute to this segregation. The green economy, despite its progressive environmental objectives, perpetuates traditional gender divisions of labour and limits women's access to the formal employment benefits and wage premiums that green jobs provide to men. Without deliberate intervention — creating green pathways in female-dominated sectors or opening

traditional green occupations to women — environmental investments risk exacerbating rather than reducing gender inequality.

Key Message 5: Green employment concentrates in rural northern governorates, bypassing Amman

Geographic concentration creates an additional barrier. Green employment clusters in rural northern governorates: Ajloun leads at 28%, followed by Mafraq at 21% and Jarash at 18%. Amman, despite hosting the largest share of Jordan's workforce, registers the lowest green rate at only 7%. Its economy is dominated by services, finance, education, and retail — sectors that international classifications identify as having minimal environmental task content. This mismatch between green employment opportunities and population concentration means current green employment patterns miss the majority of Jordan's workers.

Policy recommendations and implementation

- **Target green skills training programs in northern governorates where green employment already concentrates.** The evidence demonstrates that Ajloun, Mafraq, and Jarash achieve green employment rates of 28%, 21%, and 18% respectively, far exceeding the national average and suggesting established networks of employers, training institutions, and worker expertise in environmental occupations. Training programs for trades, construction, and environmental services should build on these existing foundations rather than attempting to create green employment from scratch in regions where market demand remains underdeveloped. Concentrating resources in Amman, despite its large workforce, would ignore the geographic reality of where green jobs exist and where workers already possess the practical skills that green occupations require. This regional targeting approach would maximize the efficiency of training investments while strengthening the economic base of areas that traditional development strategies often overlook.
- **Create dedicated pathways for women into green occupations through targeted vocational programs and workplace policy reforms.** The analysis reveals that women's exclusion from green employment stems not from wage discrimination but from occupational segregation that concentrates female workers in sectors with zero

environmental task content. Vocational training institutions could develop programs in environmental inspection, waste management systems, and sustainable construction techniques specifically designed to attract and support female participants, while employers in green sectors could implement flexible work arrangements and family-friendly policies that make traditionally male-dominated fields accessible to women. The success of such initiatives would require collaboration between the Ministry of Labor, technical education providers, and green sector employers to address both skill development and workplace culture barriers. Achieving gender inclusion in green employment would not only advance women's economic empowerment but also double the potential workforce for Jordan's environmental transition.

- **Leverage the green wage floor as a targeted anti-poverty tool by expanding green employment in sectors that employ low-wage workers.** The 28% wage premium for workers at the 10th percentile demonstrates that green jobs function as an effective redistribution mechanism, lifting the earnings of the workers who need income support most. Policymakers should prioritize green employment creation in waste management, municipal services, and construction — sectors that historically employ workers with limited educational credentials and provide pathways out of poverty. This approach would enable environmental investments to simultaneously achieve pollution reduction, job creation, and inequality re-duction objectives. Such targeting represents a departure from green economy strategies that emphasize high-skill, high-wage sectors and instead recognizes that environmental progress can and should benefit workers across the income distribution.
- **Adopt continuous measures of green task intensity rather than binary green/non-green classifications in policy design and program targeting.** The Green Task Index reveals substantial variation in environmental content across occupations that binary classifications obscure, with important implications for training design, wage policies, and investment targeting. Policymakers should use continuous measures like the GTI to identify occupations with moderate green content that could be enhanced through targeted interventions, rather than focusing exclusively on occupations that already register as unambiguously green. This nuanced approach would expand the scope for green employment creation while ensuring that public investments flow toward activities with

genuine environmental benefits. Moreover, continuous measurement would enable policymakers to track progress in greening existing occupations rather than merely counting the creation of new green jobs.

Implementation challenges

Gender norms in trades occupations present the most fundamental barrier to inclusive green employment expansion. Achieving meaningful female participation in green jobs requires confronting occupational segregation that extends far beyond the environmental sector to encompass deep-seated cultural expectations about appropriate work for women. Cultural barriers to women entering construction, waste management, and protective services reflect broader social norms about physical work, workplace interactions, and family responsibilities that training programs alone cannot address. Successful inclusion of women in green occupations would require coordinated efforts across multiple institutions — from educational systems that encourage girls to pursue technical subjects, to employers who implement policies that accommodate family responsibilities, to communities that support women in non-traditional careers. International experience suggests that such transformations require sustained effort over decades rather than short-term interventions, implying that gender inclusion in Jordan’s green economy will require long-term commitment and realistic expectations about the pace of change.

Geographic mismatch between investment flows and existing green employment creates a fundamental tension in green development strategies. International climate finance and domestic green investments tend to flow toward urban centers where infrastructure exists and institutional capacity concentrates, yet the regions with the highest green employment rates — Ajloun, Mafraq, and Jarash — are precisely those that attract the least investment and have the weakest economic foundations for absorbing large-scale green projects. This mismatch reflects broader patterns in development finance that favor areas with existing economic advantages, potentially undermining efforts to build inclusive green growth that benefits rural and marginalized communities. Bridging this gap requires deliberate spatial targeting that directs green investments toward regions where green employment already exists, even if such areas lack the institutional infrastructure that typically attracts development funding. The alternative risks creating two separate green economies: a capital-intensive, technology-focused green economy in Amman and

a labor-intensive, traditional green economy in northern governorates, with limited spillovers between them.

Measurement limitations constrain both analysis and policy design in ways that policymakers must acknowledge explicitly. The occupation-based Green Task Index, while internationally standardized and comparable across countries, reflects task profiles developed in European and North American labor markets that may not accurately capture how workers in Jordan actually spend their time or contribute to environmental objectives. Simultaneously, the self-reported survey measure captures different workers entirely — often in occupations that would not be classified as green under international definitions but that workers themselves identify as environmentally relevant. These measurement challenges are not merely technical problems but reflect deeper conceptual questions about what constitutes environmental work in different economic and cultural contexts. Policymakers should use both measures while recognizing that “green jobs” is not a single, universally agreed-upon category but rather a contested concept that requires contextual interpretation and periodic revision as Jordan’s economy and environmental challenges evolve.

References

- Alexander, N.-R., Cazzaniga, M., Fabrizio, S., Jaumotte, F., Li, L., Mondragon, J., Priano, S., & Mendes Tavares, M. (2024). Green Jobs and the Future of Work for Women and Men. *IMF Staff Discussion Notes, SDN/2024/003*. <https://doi.org/10.5089/9798400286049.006>
- Apostel, A., & Barslund, M. (2024). Measuring and characterising green jobs: A literature review. *Energy Research & Social Science, 111*, 103477. <https://doi.org/10.1016/j.erss.2024.103477>
- Consoli, D., Marin, G., Marzucchi, A., & Vona, F. (2016). Do green jobs differ from non-green jobs in terms of skills and human capital? *Research Policy, 45*(5), 1046–1060.
- Curtis, E. M., O’Kane, L., & Park, R. J. (2024). Workers and the Green-Energy Transition: Evidence from 300 Million Job Transitions. *Environmental and Energy Policy and the Economy, 5*, 127–161. <https://doi.org/10.1086/727880>
- Department of Statistics. (2023). *Household Expenditure and Income Survey 2022*. <https://dosweb.dos.gov.jo>
- Fallah, B., Krafft, C., & Wahba, J. (2019). The Impact of Refugees on Employment and Wages in Jordan. *Journal of Development Economics, 139*, 203–216. <https://doi.org/10.1016/j.jdeveco.2019.03.009>
- Firpo, S., Fortin, N. M., & Lemieux, T. (2009). Unconditional Quantile Regressions. *Econometrica, 77*(3), 953–973. <https://doi.org/10.3982/ECTA6822>
- Godoy, A., & Isaksen, E. (2025). *A Green Wage Premium?* [Working Paper No. 432]. Grantham Research Institute on Climate Change and the Environment, London School of Economics.
- Government of Jordan. (2022). *Economic Modernisation Vision 2022–2033: Unleashing Potential to Build the Future*. Royal Hashemite Court. <https://www.jordanvision.jo/en>
- Granata, J., & Posadas, J. (2024). *Why Look at Tasks when Designing Skills Policy for the Green Transition? A Methodological Note on how to Identify Green Occupations and the Skills they Require*. The World Bank. <https://doi.org/10.1596/1813-9450-10753>

ILO and UNEP. (2008). *Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World*. UNEP. <https://www.unep.org/resources/report/green-jobs-towards-sustainable-work-low-carbon-world>

International Labour Organization. (2018). *World Employment and Social Outlook 2018: Greening with Jobs*. ILO. <https://www.ilo.org/publications/world-employment-and-social-outlook-2018-greening-jobs>

Triyana, M., Jiang, A. W., Hu, Y., & Naoaj, S. (2026). Climate Shocks and the Poor: A Review of the Literature. *WIREs Climate Change*, 17(1), e70039. <https://doi.org/10.1002/wcc.70039>

Vona, F., Marin, G., & Consoli, D. (2019). Measures, drivers and effects of green employment: Evidence from US local labor markets, 2006–2014. *Journal of Economic Geography*, 19(5), 1021–1048. <https://doi.org/10.1093/jeg/lby038>

World Bank. (2022). *Jordan: Country Climate and Development Report*. World Bank. <https://www.worldbank.org/en/country/jordan/publication/jordan-country-climate-and-development-report>

World Bank. (2023). *Jordan Economic Monitor, Fall 2023: Building Success, Breaking Barriers—Unlocking the Economic Power of Women in Jordan*. World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099603312182322486>

World Bank. (2024). *Unemployment, Youth Total (% of Total Labor Force Ages 15–24) (Modeled ILO Estimate)—Jordan*. <https://data.worldbank.org/indicator/SL.UEM.1524.ZS?locations=JO>

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