

KEY MESSAGES

- Migrant workers mainly from Indonesia, but also from Bangladesh and other countries are essential to Malaysia's palm oil sector, making up about 80 per cent of the workforce prior to the COVID-19 pandemic. Despite persistent concerns about exploitation, migrants are drawn to Malaysia by the opportunity to earn higher wages than in their origin countries.
- Climate change and environmental degradation exacerbate socio-economic vulnerabilities in origin countries. Bangladeshi and Indonesian migrants interviewed on large palm oil estates in Peninsular Malaysia had experienced severe storms, floods, droughts and earthquakes, among other hazards, and some had fallen into debt as their livelihoods were negatively impacted by climate change.
- Migration into low-paid jobs is tightly controlled under Malaysian law, limited to specific sectors, with only individuals aged 18–45 allowed to apply, and spouses and children are not allowed to accompany the migrant worker. Recruitments from several countries, including Bangladesh and Indonesia, are governed by memoranda of agreement (MOUs). There have been significant challenges, including allegations of exploitation and excessive recruitment fees.
- Work conditions on large palm oil estates are highly regulated, and the migrants interviewed all appeared to earn at least the
 minimum wage, though many were paid by the weight of fruits harvested, and women were generally assigned lower-paid
 work. Personal protective equipment was provided, but not always used, particularly on hot days, and some migrants had
 been exposed to toxic chemicals.
- Migrants experienced social isolation, living within the palm oil estates, and reported facing discrimination and abuse both on
 the job and from the broader community, including police. Women migrants are highly vulnerable to harassment and genderbased violence, but also subject to deportation if they get pregnant or marry.
- Migrant workers earned enough to be able to send substantial remittances to their origin countries, benefiting their families
 and their broader communities. Upon return, many migrants expect to be well positioned to open a business or otherwise
 pursue a livelihood that does not depend on natural resources. In this sense, migration is reducing vulnerability, and thus
 helping to build climate resilience.
- Long-term family separations, social isolation, the experience of discrimination and harassment, and exploitative recruitment practices all undermine these benefits, however. It is also crucial to address gender disparities, as well as environmental hazards and workplace abuses.

Asia is highly vulnerable to the impacts of climate change,¹ and the most disaster-prone area in the world.² Over the past 11 years, nearly 80 per cent of all disaster-related internal displacement worldwide occurred in this region. This is not only due to its geography and high population density, but also to social, political and economic factors that turn hazards such as floods and droughts into disasters.³ Poverty makes it harder for people to cope with climate shocks or to adapt to changing conditions. Within communities, inequality and various forms of discrimination and marginalization can further deepen vulnerability.

For many people, jobs in relatively wealthier countries, including in Malaysia's palm oil sector, can offer a chance to earn significantly more than they could at home. If individuals can migrate regularly and safely, and have decent work and adequate accommodation, they, their families and their communities of origin may all benefit, as the earnings can be used to acquire assets, start a business, pay for education, and generally improve living standards. That, in turn, can make them more climate-resilient.

Malaysia is one of the wealthiest and most developed countries in Southeast Asia,⁴ with high demand for migrant workers to help cope with labour shortages in key sectors. The government estimates that there were about 2.18 million foreign workers as of 2018, or 14.8 per cent of the workforce,⁵ making Malaysia the No. 2 migrant-receiving country in the region, after Thailand. Using higher estimates of irregular migrants, the World Bank estimates Malaysia's total migrant workforce at 2.96–3.26 million.⁶ Indonesians and Bangladeshis make up the largest groups by far, with about 704,000 and 569,000, respectively, registered as of June 2019.⁷

One of the top employers of migrants in Malaysia is the palm oil sector, a key part of the country's bioeconomy strategy. Malaysia is the second-largest palm oil producer in the world, after Indonesia, contributing almost a third of global exports in 2020.8 Prior to the COVID-19 pandemic, migrants – mainly Indonesians – made up 80 per cent of the sector's roughly 437,000 workers.9 By law, estates can only hire migrants if they can't find Malaysians to fill jobs, 10 but they also perceive migrants as willing to work harder for lower pay.11

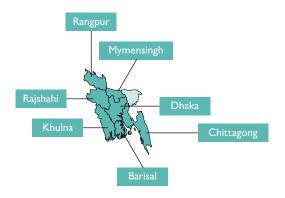
Migrants are so essential to Malaysia's palm oil sector that the COVID-19 travel ban, which lasted until October 2021, and subsequent delays in resuming regular migration flows have severely disrupted production.¹² As of June 2022, the Malaysian Estate Owners' Association (MEOA) said the sector was short by about 120,000 workers and losing revenue as it struggled to harvest the fruit.¹³

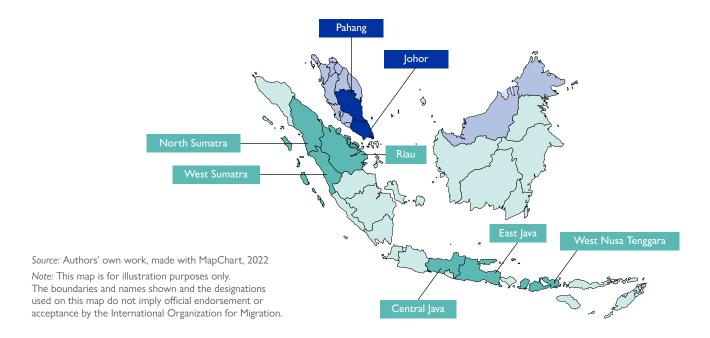
Migrants, in turn, are eager to work in Malaysia. Despite persistent concerns about exploitation,¹⁴ they are drawn by job opportunities with higher wages than in their countries of origin.¹⁵ For Bangladeshis and especially Indonesians, Malaysia is also relatively close and majority-Muslim, like their own countries. Indonesians have travelled to work in Malaysia since colonial times, while Bangladeshis have been coming since about the 1980s. Climate change is creating yet another incentive to migrate, particularly for people whose livelihoods are connected to natural resources and who have experienced floods and droughts.



This policy brief summarizes the findings of a joint study by the International Organization for Migration (IOM) and the Stockholm Environment Institute (SEI) that examined links between climate change and labour migration. In Malaysia, the study focused on workers from Bangladesh and Indonesia employed on large estates in Johor and Pahang, the top two palm oil-producing states in Peninsular Malaysia. The purpose of this brief is to provide insights on the experiences of migrants working on palm oil estates and recommend policy reforms and other actions to improve conditions, in line with Malaysia's commitments on human rights, labour rights and sustainability. Figure 1 provides an overview of the research approach, which also involved an in-depth review of the policy and academic literature.

Figure 1. Overview of research sites (in blue) and migrants' origin communities (in green), and summary of research





Key informants interviewed:

10 (4 women, 6 men, remotely)

Multi-stakeholder consultations:

21 participants (13 women, 7 men, 1 non-binary, remotely)

22 from Bangladesh (all men);

23 for bull of (5 men)

21 from Indonesia (5 women, 16 men)

Employers and local authorities interviewed on site: 5 in Johor (all men), 4 in Pahang (all men)

It is important to note that in Malaysia, there are large, medium and small palm oil estates, and employment conditions differ significantly between larger and smaller holdings.¹⁷ About three-fifths of Malaysia's palm oil fruits comes from plantations owned by conglomerates or large businesses.¹⁸ All migrant interviews for this study were conducted on large estates, with workers selected by the employers.¹⁹

CLIMATE CHANGE, ENVIRONMENTAL DEGRADATION AND ECONOMIC DRIVERS OF MIGRATION

With much of its land area in a flat, low-lying delta, Bangladesh is facing devastating impacts from sea-level rise, saltwater intrusion, tropical cyclones and extreme rainfall, including severe floods that threaten infrastructure, lives and livelihoods.²⁰ Indonesia, an archipelago nation, faces not only severe climate risks – including sea-level rise, destructive storms, extreme rainfall, floods and landslides²¹ – but also earthquakes, tsunamis and volcanic eruptions.²² The combination of physical risks with poverty, environmental degradation and other factors creates significant vulnerability in both countries.²³

Malaysia faces many serious risks from climate change as well,²⁴ with implications for its own citizens and for migrants. However, as shown in Table 1, for several reasons, including much-higher incomes and a more diversified economy, Malaysia is far less vulnerable, with a greater readiness to adapt.

Table 1. Income, economic diversification, climate vulnerability and adaptation readiness in Bangladesh, Indonesia and Malaysia

	GDP per capita (2021, current US\$)	Agriculture share of GDP (%, 2021)	ND-GAIN rankings (2022)	
			Vulnerability	Readiness
Bangladesh	2,503	11.6	29 th	167 th
Indonesia	4,292	13.3	76 th	103 rd
Malaysia	11,371	9.6	135 th	53 rd

Notes: All these indicators are imperfect proxies, but they provide valuable context. GDP per capita indicates the level of wealth and economic development in a country, while the share of GDP from agriculture (as well as forestry and fishing, which are included in these figures) provides an indication of how much a country has diversified its economy, and also highlights the extent to which people depend on highly climate-sensitive activities for their livelihoods. The Notre Dame Global Adaptation Initiative (ND-GAIN) Index measures a total of 181 countries. For vulnerability, higher rank means the country is more vulnerable to the effects of climate change. For readiness, higher rank means the country is more able to leverage investments and convert them to adaptation actions.

Sources: World Bank and ND-GAIN.²⁵

Migrants interviewed for this study described experiencing multiple natural hazards in their country of origin. Bangladeshis reported floods, storms and droughts as the main threats; Indonesians, earthquakes and droughts. Some of these shocks were experienced repeatedly and resulted in lost crops, food insecurity and, for one man, the loss of his home. People who described themselves as relatively well-off – with land, machinery and some money – had generally been better able to cope and adapt. One Bangladeshi said his family had started farming fish, which is less susceptible to heavy rain or hailstorms than rice cultivation. They still plant rice as well, but a different variety that grows in months when natural hazards are less likely.

It is important to note that income is only one of several factors that affect farmers' adaptive capacities.²⁶ Marginalized groups such as women, youth, elders, people with disabilities, ethnic and religious minorities, sexual and gender minorities, and Indigenous peoples may have fewer assets than their neighbours, lack access to finance, be excluded from decision-making in their households and/or communities, and even be unable to move around freely (or safely). As a result, they may be unable to implement adaptation strategies that are available to others.

Along with climate change, in countries of origin, migrants said they had been affected by environmental degradation linked to development activities, such as road construction, the removal of trees, a canal and barrage system on a river, and water pollution. The establishment of large-scale palm oil estates has also been linked to forced displacement in Indonesia,²⁷ as well as the clearing of peatlands and forests.

The workers interviewed in Malaysia did not generally describe climate change or environmental degradation as key factors in their migration, though the ones who said they were in debt mostly cited earthquakes and floods as the causes. A migrant from Khulna, Bangladesh, said that after destructive floods, "those who worked abroad had money, but we had no money. However, Allah blessed us, and I won the [work visa] lottery, so I came here." Several Indonesians said losses they experienced in the 2018 earthquake had led them to migrate.

Overall, however, workers from Bangladesh and Indonesia alike cited higher wages in Malaysia as their main reason for migrating. One Bangladeshi migrant noted that in his home country, "whatever I earn is spent," but "if I work abroad, I can send money home every month even after maintaining my own expenses. I can save most of my income." Similarly, a migrant from Indonesia noted that back home, incomes are "enough to just eat," adding: "For example, to buy a car – that is something we can't afford." A migrant from Central Java said plantation workers in Malaysia earns about as much as office workers in Indonesia. Pay on Indonesian palm oil estates is rising, however, which could change the economic calculus.

MALAYSIA'S PALM OIL SECTOR IN THE CONTEXT OF CLIMATE CHANGE

The Government of Malaysia started a comprehensive palm oil biofuel programme in 1982 and adopted its National Biofuel Policy in 2006, followed by the National Biofuel Industry Act in 2007, which regulates the sector and established the mandatory blending of 5 percent palm oil biodiesel in diesel fuel for transport. In 2014, a 7 per cent biodiesel blending programme was introduced. These policies are key parts of Malaysia's climate commitments under the Paris Agreement,²⁸ but also aim to capitalize on global biofuel markets and reduce Malaysia's dependency on fossil fuels.²⁹ Palm oil has been the country's top crop for three decades, and the area harvested has grown from 1.75 million hectares in 1990, to 5.2 million in 2019.³⁰

Large-scale palm oil cultivation has taken an environmental toll. Through deforestation, land conversion, and peatland and forest fires, it has driven up Malaysia's greenhouse gas emissions.³¹ The expansion of palm oil has also been associated with biodiversity loss and soil erosion, and plantations in Malaysia have profoundly altered freshwater ecosystems in the last decades, mostly because of the use of fertilizers, gasoline for weed cutters, and empty fruit bunch disposals.³² Recognizing these issues, and responding to international pressure, major actors in the industry have worked to raise standards for sustainability.³³

Johor and Pahang states, where interviews for this study were conducted, are both experiencing climate change impacts and other environmental challenges that affect crop production and rural livelihoods. These include droughts, floods, rising temperatures and water and soil contamination from palm oil industrial activities.³⁴ Palm oil producers in Peninsular Malaysia are already struggling with pests and diseases, and tree mortality is projected to significantly increase with climate change, which is bringing higher temperatures and more erratic rainfall.³⁵ Several studies have also documented significant health hazards faced by workers on plantations and in palm oil processing plants across Malaysia.³⁶ The impacts of rising temperatures and heatwaves on plantation workers have not yet been widely studied in Malaysia, but across Southeast Asia, heat stress is expected to significantly affect outdoor workers' productivity.³⁷

LABOUR MIGRATION LAWS AND RECRUITMENT PRACTICES

Employers in Malaysia who wish to hire foreign workers must first post vacancies on MyFutureJobs,³⁸ a government-run website. If they cannot fill the jobs with Malaysians, they can apply for a quota of migrant workers and begin to recruit.³⁹ To qualify for a visa, migrants must be aged 18–45. About 29 per cent of registered Indonesian workers are in the plantation sector, but only about 5 per cent of Bangladeshis.⁴⁰ Men far outnumber women on plantations, due to employer preferences, gender and social norms that prevent women from migrating, and an important legal restriction: workers are not allowed to bring their spouse or children.⁴¹

Labour migration from Bangladesh to Malaysia has been governed by a series of agreements between the two countries, with significant changes made over the years to address inefficiencies as well as significant evidence of exploitation.⁴² In 2012, Bangladesh and Malaysia created the Government-to-Government (G2G) programme, in which Bangladeshi officials directly mediated recruitments. However, although migrants who participated found it beneficial, far too few workers were delivered to employers, so a new programme was established in 2015, G2G Plus, mediated by 10 recruitment firms.⁴³

In September 2018, for multiple reasons, including excessive recruitments and fees averaging almost USD 4,000,⁴⁴ well above those allowed under the programme, Malaysia suspended G2G Plus. Recruitments only resumed in 2022, after the two governments signed a new memorandum of understanding (MOU) in December 2021, creating a new system run by 25 private agencies.⁴⁵ However, implementation was delayed due to disagreements over worker protections,⁴⁶ and progress has been slow. In September 2022, a new G2G programme was launched to directly recruit 10,000 Bangladeshis, as a one-off labour intake.⁴⁷

Most Bangladeshis interviewed for this study said they had entered Malaysia around 2014–2015, and the average cost reported was about BDT 40,000 (USD 420). Some who did not migrate through the G2G programme said that they had borne significant costs, needing two years or longer to pay off their debt. A few borrowed money from non-governmental organizations (NGOs) that offered low interest rates.

Labour migration from Indonesia to Malaysia (except for domestic workers) is governed by a 2004 MOU between the two governments. Migration for plantation jobs has gone relatively smoothly, in sharp contrast to the widespread exploitation and abuse found among domestic workers, which has been the subject of some tensions between the countries.⁴⁸ Still, plantation workers may be exploited on a smaller scale. A survey by the International Labour Organization (ILO) in 2018–2019 found that 98 per cent of Indonesians working on plantations had paid an agent or broker to facilitate the process – as little as USD 52, but as much as USD 1,627 (the average was USD 464).⁴⁹

Indonesian migrants interviewed for this study reported paying about IDR 2.6 million (USD 180) to migrate to Malaysia, linked to applying for passports and other documents. Some said they had borrowed money from relatives and neighbours, in the range of IDR 2–5 million (USD 135–340). Notably, Indonesia's Perka BP2MI 9/2020 regulation forbids recruiters from charging migrants headed for plantations for many travel and migration costs. Within Malaysia, the Private Employment Agencies Act 1981 caps recruitment fees for non-Malaysian job-seekers at the equivalent of the first month's wages. However, during the COVID-19 pandemic, employers have sought to have migrant workers cover recruitment fees and related costs, especially given the additional costs associated with quarantines.⁵⁰

The system used by migrant workers is called Visit Pass (Temporary Employment). It stipulates that migrant workers with the pass are allowed to stay in Malaysia for maximum of 10 years, with annual renewals required; are not allowed to change their employer even within the same industry or sector, with very limited exceptions; are not allowed to bring dependents to Malaysia; and have no pathway to become permanent residents.⁵¹

A final issue that must be highlighted is that Malaysia's immigration policies not only bar migrant workers from bringing their spouses and children with them, but also prohibit migrant workers from marrying or having children.⁵² This is a key reason why so few migrant workers are women, as cultural norms strongly discourage women from migrating alone. For those who do, there is further peril if they are sexually active (or are raped): the work permit law stipulates that migrant workers who become pregnant are considered to have violated the conditions of their work permit and are liable to deportation.⁵³

Employer preferences also shape the makeup of the migrant workforce. An ILO survey found companies were generally less concerned about the workers' technical skills, work experience, ethnicity or language abilities, but they did prefer Indonesians, men (whom they viewed as stronger) and people under 40.⁵⁴ Having men come alone may also suit businesses. As one employer put it in an interview for this study: "If workers would come with families, maybe there would be a social issue. The wife went to work and something happened, such as harassment ... maybe the wife gets disturbed by someone else, and will need to be sent to the police. It will cause more problems in the operations. ... Maybe if families come, we have to give them separate housing ... they cannot stay together with other workers in one house."

WORK AND LIVING CONDITIONS ON LARGE PALM OIL ESTATES

Malaysia has ratified multiple ILO conventions and protocols that lay out fundamental principles and standards for protecting workers' rights.⁵⁵ It has also made efforts to promote responsible business conduct by promoting the localization of the UN Guiding Principles on Business and Human Rights.⁵⁶ In addition, it is a member of the Global Compact for Safe, Orderly and Regular Migration,⁵⁷ launched its first National Action Plan on Forced Labour,⁵⁸ and it is drafting its first National Action Plan on Business and Human Rights.⁵⁹

Malaysia's own laws also provide significant protections for workers, including migrants. They include the Employment Act 1955, for which the latest updates entered into force on 1 January 2023,⁶⁰ as well as the Employees' Minimum Standards of Housing, Accommodations and Amenities Act 1990 (amended in 2019) and the Occupational Safety, Health and Environment Act 1994. These and other laws forbid forced labour, excessive overtime, withholding wages, taking workers' passports, and abusing workers in various manners,⁶¹ but enforcement has been found to be weak in practice, especially on plantations.⁶²

Malaysia's large palm oil estates are highly regulated, however, and all migrants interviewed for this study had written employment contracts and appeared to earn at least the minimum wage. Their schedules varied, with some workers starting at 8 a.m. and finishing at 4 p.m. or 5 p.m., but workers who were not directly engaged in cutting or harvesting palm fruit assigned different hours. By law, workers in Malaysia must have at least one day off per week, but most interviewed migrants said that although their employers do not require it, they work overtime and on Sundays to increase their income.

Most migrant workers interviewed were paid once per month, 1,500 to 3,000 ringgit (MYR), or about USD 340–670. The minimum wage is of MYR 1,500 (USD 340) per month as of May 2022. Notably, the workers interviewed said their pay depended on the tasks performed or the amount harvested, measured by weight (per formulas that were not transparent). In general, men had more lucrative jobs, while the women – all Indonesians in this study's sample – were relegated to tasks that were lower-profile and less well paid. One employer interviewed said women are assigned "only suitable" duties, such as gardening, applying pesticide, setting bait for rats, conducting censuses, and planting and caring for seedlings.

Although workers on Malaysia's large palm oil estates are provided personal protective equipment (PPE), one Bangladeshi migrant said it is not always used, as it feels too hot, and the goggles provided fog up as workers perspire while harvesting fruit. Another migrant from Bangladesh said many workers have gotten sick and even been hospitalized due to pesticide exposure. Small-scale farmers interviewed near palm oil estates said pesticides from the plantations also killed plants and animals in surrounding areas and contaminated waterways, making it impossible to fish.

Migrant workers on large palm oil estates live in company-provided housing within the estates. Often they are also provided with basic facilities such as health clinics, prayer rooms, grocery stores, and transportation systems, all within the estates and thus separated from surrounding communities.⁶³ An employer at Pahang said workers there lived in 60 houses with two or three rooms each, a bathroom and a kitchen. The employers cover the cost of electricity in migrants' housing up to a point, but if electricity usage exceeds the covered amount, they deduct the difference from the migrants' salary.

Not only are the workers socially isolated, but they cannot leave easily. Their work permits are tied to a specific employer, and some migrants said their employers had held on to their passports. Some also said that claiming annual leave to visit family back home – particularly in the context of the pandemic – had become challenging. Despite the risk of deportation if they switch jobs, some migrants do leave large palm oil estates to work on smallholder estates. A smallholder farmer interviewed in Malaysia said this happens mainly with migrants whose contracts are coming to an end. Smallholders may pay slightly more than large estates, but working informally, migrants lack key protections provided by regular jobs.

Bangladeshi migrants described feeling at a disadvantage relative to Indonesians, who they said are treated more favourably by employers. Indonesians also generally have a wider social network than migrants from other countries and can speak and understand the local language (Bahasa Melayu), which is similar to their own. This makes them more aware of information shared by the employers or the government and communicate their concerns to them.

A 2019 study found that negative views of migrants are common in Malaysia,⁶⁴ and prejudices often led people to condone discrimination, exploitation and even violence. In interviews, several migrants described experiencing bigotry as well as difficulties with police. Indonesians were not exempt – one migrant said he'd had "a lot of problems" with police, who would demand bribes from migrants even if they had all the proper documents. Women migrants, meanwhile, are highly vulnerable to harassment and gender-based violence – and if they get pregnant or marry, they are subject to deportation.⁶⁵

IS MIGRATION CONTRIBUTING TO CLIMATE RESILIENCE?

The most direct way in which migration affects development and climate resilience in countries of origin is through economic remittances. Globally, personal remittances are now triple the volume of official development assistance to low- and middle-income countries, and Bangladesh was the seventh-largest recipient in 2021, at USD 22 billion; Indonesia received an estimated USD 9.4 billion.⁶⁶ The average monthly remittance reported by Bangladeshis in this study was USD 413, while Indonesians sent an average of USD 270. This corresponds to 81 and 53 per cent, respectively, of their earnings.

Asked how the money was used, Bangladeshi migrants' most common answers were to buy land and other assets (14 out of 22); to cover household expenses, such as food (12); and to pay for education (6). A migrant from Rangpur said he sends money to his mother and brother, and they have bought land and plan to buy more, improving their economic security. A migrant from Dhaka said the savings he has accrued made his family better able to cope with future shocks: "I am now confident that even if we suffer any damage caused by disasters, we have saved enough money to recover from it."

Indonesians most frequently reported paying for education (12 out of 21), basic household expenses (9) and investing in community infrastructure (8). As one woman put it: "We came here to make more money. To send our children to higher education." One man said he had used his earnings to upgrade from a wooden house to a stone house. An Indonesian man from West Nusa Tenggara who described himself as relatively well-off said that not only could he now help meet family expenses, but he also helped pay for a mosque and a boarding school in his community.

The knowledge, ideas and skills that migrants acquire abroad can also highly contribute to development and adaptation. A migrant from West Nusa Tenggara in Indonesia said he could see himself putting his skills to work on an Indonesian plantation. Bangladesh does not have a significant palm oil industry, but a Bangladeshi migrant from Chittagong said the government should invest in building one and provide opportunities for returning migrants to apply their skills, as this could make Bangladesh "much richer".

Several migrants interviewed said they hope the money they earn can enable them to leave agriculture, or at least diversify their livelihoods, as farming is too precarious and vulnerable to environmental impacts. An Indonesian migrant said when he returned, he hoped to open a business, such as a furniture shop, if he had enough money for wood and tools. Bangladeshi migrants who had previously worked in agriculture also spoke about starting businesses or otherwise finding new livelihoods.

The take-away is that for these workers, their families, and communities, labour migration is indeed contributing to climate resilience – but at a cost: long-term family separation, social isolation and exposure to health hazards. This means that vulnerable people are disproportionately bearing the burden of paying for adaptation. Climate justice demands more equitable solutions.



HOW COULD MECHANIZATION AFFECT MIGRANT WORKERS?

Hiring migrant workers through lawful channels is costly and burdensome for employers – and, as noted, Malaysian palm oil producers have faced severe labour shortages since the COVID-19 pandemic. Companies have thus sought ways to increase mechanization and reduce labour needs, which can also reduce their exposure to risks related to worker injuries and unsafe conditions.⁶⁷ Employers interviewed for this study said mechanization may also attract local workers, reducing the need for migrants. Moreover, they said, mechanization is required to cope with the impacts of climate change, as workers may not be as productive as temperatures rise and extreme heat becomes more common.

Large-scale palm oil estates in Malaysia have been aiming to reduce their reliance on migrant workers by 30 to 40 per cent, by investing in practices that rely more on mechanization and require less labour.⁶⁸ An employer in Johor said his company could reduce its labour needs by about half by mechanizing tasks such as spraying, but not harvesting. Mechanization is less viable for smallholders in Malaysia, however, as it is expensive, and they do not have the resources or economies of scale to afford it. For migrants, meanwhile, mechanization could be a double-edged sword: reducing on-the-job health hazards, but also reducing demand for workers.

POLICY RECOMMENDATIONS

- Recognize climate change adaptation as a transboundary challenge⁶⁹ and engage with Bangladesh, Indonesia and other countries in the region to facilitate safe, orderly and regular migration for people from areas facing severe climate shocks. This includes collaborating to implement the ILO General Principles and Operational Guidelines for Fair Recruitment.⁷⁰
- Recognize that migrants on plantations are particularly vulnerable to climate change impacts such as extreme heat, and explicitly integrate them in Malaysia's resilience-building efforts, starting with the ongoing development of a National Adaptation Plan (MyNAP).⁷¹ Malaysia can also engage in South–South cooperation to help its neighbours build resilience.
- Invest in substantial additional research to better understand current recruitment practices including potential discrimination and excessive fees as well as labour practices in the plantation sector, and improve monitoring and inspections, as recommended by IOM.⁷² The ILO has also provided recommendations for reducing costs and logistical difficulties for migrants.⁷³
- Reform migration policies that keep families separated and discriminate against women by depriving them of their reproductive freedom. Notably, previous research in Sabah state found large numbers of undocumented migrants on palm oil estates, including many women and 50,000–200,000 children, and identified widespread exploitation and abuse.⁷⁴ While conditions may be quite different in Peninsular Malaysia, providing a path to regular migration without family separation has been recommended as a way to help prevent exploitation.⁷⁵ Allowing family reunification would also significantly reduce the emotional toll on migrants.
- Work closely with the plantation sector and with certification schemes to ensure they are fully aligned with the UN
 Guiding Principles on Business and Human Rights, and emphasize that labour abuses, including against migrants, will not
 be tolerated. Technical assistance for employers to learn about the Guiding Principles and how to comply, with support
 for integrating the principles into their corporate social responsibility and climate commitments, would also be helpful.

ENDNOTES

- Shaw, R. et al. 2022. "Asia." In Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, edited by H.-O. Pörtner et al. Cambridge, UK, and New York: Cambridge University Press. https://www.ipcc.ch/report/ar6/wg2/.
- 2 IDMC. 2022. "Global Report on Internal Displacement 2022." Internal Displacement Monitoring Centre. https://www.internal-displacement.org/global-report/grid2022/.
- Ribot, J. 2014. "Cause and Response: Vulnerability and Climate in the Anthropocene." The Journal of Peasant Studies 41 (5): 667–705.
- See Table 1, as well as World Bank data on GDP per capita (purchasing power parity) across the region: https://data. worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=TH-MM-KH-VN-LA-MY-SG-BN-ID-PH. Malaysia also ranked 62nd on the 2021 Human Development Index, qualifying as a country with "very high" human development, while Indonesia was 114th, near the bottom of countries with "high" human development, and Bangladesh was 129th, rated as having "medium" human development. See: UNDP. 2022. "Human Development Report 2021/2022." New York: United Nations Development Programme. https://hdr.undp.org/content/human-development-report-2021-22.
- 5 DOSM. 2020. "Situasi Pekerja Bukan Warganegara Di Malaysia (Situation of Non-Citizen Workers in Malaysia)." Department of Statistics Malaysia. https://www.dosm.gov.my/v1/uploads/files/6_Newsletter/Newsletter%202020/DOSM_BPTMS_2-2020_Siri_39.pdf.
- Note that the World Bank estimates are for 2017 (when the official estimate is 2.27 million foreign workers), see: Yi, S. et al. 2020. "Who Is Keeping Score? Estimating the Number of Foreign Workers in Malaysia." The Malaysia Development Experience Series. Washington, DC: World Bank. doi:10.1596/33730.
- DOSM, 2020, "Situasi Pekerja Bukan Warganegara Di Malaysia (Situation of Non-Citizen Workers in Malaysia)." The DOSM attributes these numbers to the Malaysian Immigration Department.
- 8 Gaulier, G. and S. Zignago. 2020. "BACI: International Trade Database at the Product-Level: The 1995-2020 Version." CEPII Working Paper, N°2010-23. CEPII. http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=37.
- 9 Chu, M.M. 2022. "Malaysia Palm Group Warns of Losses Ahead from 'severe' Labour Crunch." Reuters, June 6. https://www.reuters.com/markets/commodities/malaysia-palm-group-warns-losses-ahead-severe-labour-crunch-2022-06-06/.
- Mahendran, N. et al. 2022. "Cost of Recruitment in the Indonesia–Malaysia Migration Corridor: Employer Perspectives from Participating Plantation Companies." Bangkok: Earthworm Foundation and International Labour Organization. http://www.ilo.org/asia/publications/WCMS_840109.
- 11 Shahiri, H., Z. Cheng, and A.A. Al-Hadi. 2021. "Why Do Low-skilled Foreign Workers Have a Wage Advantage? Evidence from the Palm Oil Plantation Sector in Malaysia." Population, Space and Place 27 (3). doi:10.1002/psp.2404.
- 12 Chu, 2022, "Malaysia Palm Group Warns of Losses Ahead from 'severe' Labour Crunch."
- 13 Chu, 2022.
- Llewellyn, A. 2021. "Indonesian Migrants Brave Treacherous Seas for Malaysian Dream." Al Jazeera, December 28. https://www.aljazeera.com/economy/2021/12/28/indonesian-migrants-brave-treacherous-seas-for-malaysian-dream.
 - Theng, T.T. and J. Romadan. 2020. "The Economic Case against the Marginalisation of Migrant Workers in Malaysia." LSE Southeast Asia Blog (blog), October 1. https://blogs.lse.ac.uk/seac/2020/10/01/the-economic-case-against-the-marginalisation-of-migrant-workers-in-malaysia/.
 - Gottwald, E. 2018. "Certifying Exploitation: Why 'Sustainable' Palm Oil Production Is Failing Workers." New Labor Forum 27 (2): 74–82. doi:10.1177/1095796018765767.
- Dannecker, P. 2013. "Rationalities and Images Underlying Labour Migration from Bangladesh to Malaysia." International Migration 51 (1): 40–60. doi:10.1111/j.1468-2435.2009.00547.x.
 - Kaur, A. 2010. "Labour Migration Trends and Policy Challenges in Southeast Asia." Policy and Society 29 (4): 385–97. doi:10.1016/j.polsoc.2010.09.001.
- Vigil, S. and D. Kim (2023). International Labour Migration in a Changing Climate: Insights from Malaysia and Thailand. International Organization for Migration (IOM) and Stockholm Environment Institute (SEI), Bangkok, Thailand.
- Wickramasekara, P. 2020. "Malaysia: Review of Admission and Recruitment Practices of Indonesian Workers in the Plantation and Domestic Work Sectors and Related Recommendations." International Labour Organization. https://www.ilo.org/asia/publications/WCMS_749695/.
- Rahman, S. 2020. "Malaysian Independent Oil Palm Smallholders and Their Struggle to Survive 2020." Perspective Issue 2020, No. 144. Yusof Ishak Institute. https://www.iseas.edu.sg/wp-content/uploads/2020/12/ISEAS_Perspective_2020_144.pdf.

- 19 This was due to difficulties in gaining access to workers. Although the interviews were conducted in rooms where employers could not listen in or interfere, to protect workers' confidentiality, the sample selection and the location may have affected who participated and how they answered questions.
- 20 For a brief summary, see the country profile on the World Bank Climate Change Knowledge Portal: https://climateknowledgeportal.worldbank.org/country/bangladesh/.
- 21 For a brief summary, see the country profile on the World Bank Climate Change Knowledge Portal: https://climateknowledgeportal.worldbank.org/country/indonesia/.
- 22 See the ThinkHazard! profile for Indonesia: https://thinkhazard.org/en/report/116-indonesia.
- Eckstein, D., V. Künzel, and L. Schäfer. 2021. "Global Climate Risk Index 2021." Germanwatch. https://reliefweb.int/sites/reliefweb.int/files/resources/Global%20Climate%20Risk%20Index%202021_1_0.pdf.
 - Bündnis Entwicklung Hilft and IFHV. 2021. "WorldRiskReport 2021 Focus: Social Protection." Berlin: Bündnis Entwicklung Hilft and Ruhr University Bochum Institute for International Law of Peace and Armed Conflict (IFHV). https://weltrisikobericht.de/wp-content/uploads/2021/09/WorldRiskReport_2021_Online.pdf.
- For a brief summary, see the country profile on the World Bank Climate Change Knowledge Portal: https://climateknowledgeportal.worldbank.org/country/malaysia/.
- See World Bank data for GDP per capita (current US\$): https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=BD-ID-MY, and for agriculture, forestry, and fishing, value added (% of GDP): https://data.worldbank.org/indicator/NV.AGR. TOTL.ZS?locations=BD-ID-MY.
 - The ND-GAIN Country Index, last updated in July 2022, is available at https://gain.nd.edu/our-work/country-index/.
- 26 Shaw et al., 2022, "Asia."
- Li, T.M. 2017. "Intergenerational Displacement in Indonesia's Oil Palm Plantation Zone." The Journal of Peasant Studies, May. https://www.tandfonline.com/doi/full/10.1080/03066150.2017.1308353.
- Government of Malaysia. 2015. "Intended Nationally Determined Contribution of the Government of Malaysia." Kuala Lumpur. https://unfccc.int/sites/default/files/NDC/2022-06/INDC%20Malaysia%20Final%2027%20November%202015%20 Revised%20Final%20UNFCCC.pdf.
- Rahyla, R.S., R.B. Radin Firdaus, and F. Purwaningrum. 2017. "Upgrading of Malaysian Palm Oil Biofuel Industry: Lessons Learned from the USA and Germany's Policies." Edited by F. Yildiz. Cogent Food & Agriculture 3 (1): 1279760. doi:10.1080/23311932.2017.1279760.
- 30 Data from FAOStat: https://fenix.fao.org/faostat/internal/en/#data.
- Schmidt, J. and M. De Rosa. 2020. "Certified Palm Oil Reduces Greenhouse Gas Emissions Compared to Non-Certified." Journal of Cleaner Production 277 (December): 124045. doi:10.1016/j.jclepro.2020.124045.
- Ayompe, L.M., M. Schaafsma, and B.N. Egoh. 2021. "Towards Sustainable Palm Oil Production: The Positive and Negative Impacts on Ecosystem Services and Human Wellbeing." Journal of Cleaner Production 278 (January): 123914. doi:10.1016/j. jclepro.2020.123914.
 - Chin, M. 2011. "Biofuels in Malaysia: An Analysis of the Legal and Institutional Framework." Working Paper 64. Center for International Forestry Research. https://www.cifor.org/knowledge/publication/3470.
- At the international level, the Roundtable on Sustainable Palm Oil has played a key role in this regard: https://rspo.org. In addition, within Malaysia, the industry created the Malaysian Sustainable Palm Oil Certification Scheme: https://www.mpocc.org.my.
- Tukimat, N.N.A., A.S. Othman, and S.N. Rahmat. 2021. "Analysis of Potential Extreme Drought Using Integrated Statistical Model." IOP Conference Series: Earth and Environmental Science 682 (1): 012043. doi:10.1088/1755-1315/682/1/012043.
 - Tang, K.H.D. 2019. "Climate Change in Malaysia: Trends, Contributors, Impacts, Mitigation and Adaptations." Science of The Total Environment 650 (February): 1858–71. doi:10.1016/j.scitotenv.2018.09.316.
 - Tan, M.L. et al. 2015. "Impacts of Land-Use and Climate Variability on Hydrological Components in the Johor River Basin, Malaysia." Hydrological Sciences Journal 60 (5): 873–89. doi:10.1080/02626667.2014.967246.
- Murphy, D.J., K. Goggin, and R.R.M. Paterson. 2021. "Oil Palm in the 2020s and beyond: Challenges and Solutions." CABI Agriculture and Bioscience 2 (1): 39. doi:10.1186/s43170-021-00058-3.
- Myzabella, N. et al. 2019. "Occupational Health and Safety in the Palm Oil Industry: A Systematic Review." The International Journal of Occupational and Environmental Medicine 10 (4): 159–73. doi:10.15171/ijoem.2019.1576.

- Bezner Kerr, R. et al. 2022. "Food, Fibre, and Other Ecosystem Products." In Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, edited by H.-O. Pörtner et al. Cambridge, UK, and New York: Cambridge University Press. https://www.ipcc.ch/report/ar6/wg2/.
- 38 See https://myfuturejobs.gov.my.
- 39 Mahendran et al., 2022, "Cost of Recruitment in the Indonesia–Malaysia Migration Corridor: Employer Perspectives from Participating Plantation Companies."
 - The quotas are calculated on the Integrated Foreign Worker Management System (ePPAx): https://www.eppax.gov.my/eppax/semak/semakanKelayakanPA.
 - See also the official foreign worker portal: https://www.imi.gov.my/index.php/perkhidmatan-utama/pekerja-asing-2/.
- 40 Wickramasekara, 2020, "Malaysia: Review of Admission and Recruitment Practices of Indonesian Workers in the Plantation and Domestic Work Sectors and Related Recommendations."
- 41 Earthworm. 2019. "Insights Into Recruitment Costs and Practices Amongst Small-Medium Sized Companies In The Palm Oil Industry In Peninsular Malaysia." Malaysia: Earthworm. https://www.earthworm.org/uploads/files/recruitment-practices-malaysia-2019.pdf.
- 42 Mubde, M.B. et al. 2022. "The Hidden Costs of Migration: Evaluating the Bangladesh-Malaysia Corridor." Winrock International. https://winrock.org/document/the-hidden-costs-of-migration-evaluating-the-bangladesh-malaysia-corridor/.
- 43 Mobarak, M., I. Sharif, and M. Shrestha. 2020. "Returns to Low-Skilled International Migration: Evidence from the Bangladesh-Malaysia Migration Lottery Program." Policy Research Working Paper No. 9165. Washington, DC: World Bank. doi:10.1596/1813-9450-9165.
- 44 Mubde et al., 2022, "The Hidden Costs of Migration: Evaluating the Bangladesh-Malaysia Corridor."
- Jaya, P. 2022. "Demand for Bangladeshi Workers Not High: Malaysian Minister." The Daily Star, June 2. https://www.thedailystar.net/nrb/migration/news/demand-bangladeshi-workers-not-high-malaysian-minister-3037636.
- Lee, L., R. Latiff, and M.M. Chu. 2022. "Malaysia Firms Turn down Orders as Migrant Labour Shortage Hits." Reuters, June 13, sec. Asia Pacific. https://www.reuters.com/world/asia-pacific/malaysia-firms-turn-down-orders-migrant-labour-shortage-hits-2022-06-13/.
- 47 Palma, P. 2022. "KL to Take 10k Workers under G2G System." The Daily Star, September 29. https://www.thedailystar.net/nrb/migration/skilled-migration-more/news/kl-take-10k-workers-under-g2g-system-3130716.
- 48 Reuters. 2022. "Indonesia Agrees to Lift Freeze on Sending Migrant Workers to Malaysia." July 28, sec. Asia Pacific. https://www.reuters.com/world/asia-pacific/malaysia-says-indonesia-agrees-lift-freeze-sending-migrant-workers-2022-07-28/.
- 49 ILO. 2020. "Migration Cost Survey among Indonesian Plantation Workers in Malaysia." Kuala Lumpur: International Labour Organization. http://www.ilo.org/asia/publications/issue-briefs/WCMS_758611/lang--en/index.htm.
- Ratha, D. et al. 2022. "Migration and Development Brief 36: A War in a Pandemic Implications of the Ukraine Crisis and COVID-19 on Global Governance of Migration and Remittance Flows." Global Knowledge Partnership on Migration and Development. Washington, DC: World Bank. https://www.knomad.org/publication/migration-and-development-brief-36.
- 51 Yi et al., 2020, "Who Is Keeping Score? Estimating the Number of Foreign Workers in Malaysia."
- Reed, R. 2019. "Gender-Based Impacts of Labour Migration, Sustainability Challenges and Oil Palm in Malaysia." The Public Sphere: Journal of Public Policy 7 (1): 77–90.
- Freeman, T. et al. 2021. "At the Limits of 'Capability': The Sexual and Reproductive Health of Women Migrant Workers in Malaysia." Sociology of Health & Illness Early View. doi:10.1111/1467-9566.13323.
- Mahendran et al., 2022, "Cost of Recruitment in the Indonesia–Malaysia Migration Corridor: Employer Perspectives from Participating Plantation Companies."
- 55 See https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:102960.
- United Nations. 2011. "UN Guiding Principles on Business and Human Rights." New York and Geneva: United Nations Human Rights Council. https://www.business-humanrights.org/en/big-issues/un-guiding-principles-on-business-humanrights/.
- United Nations. 2018. "Global Compact for Safe, Orderly and Regular Migration." Marrakech. https://refugeesmigrants.un.org/migration-compact.
- Government of Malaysia. 2021. "National Action Plan on Forced Labour (2021-2025)." Kuala Lumpur: Ministry of Human Resources. https://www.mohr.gov.my/ebook/National%20Action%20Plan%20On%20Forced%20Labour/NAPFL%202021-2025.pdf.

- 59 See https://globalnaps.org/country/malaysia/ and: Malay Mail. 2021. "Home Ministry Launches National Action Plan on Anti-Trafficking in Persons 2021-2025." March 31. https://www.malaymail.com/news/malaysia/2021/03/31/home-ministry-launches-national-action-plan-on-anti-trafficking-in-persons/1962751.
 - ILO. 2021. "Malaysia Takes Major Step towards Ending Forced Labour." International Labour Organization press release. November 26. http://www.ilo.org/asia/media-centre/news/WCMS_829873/lang--en/index.htm.
- For the text of the law and various amendments over the decades, see the ILO NATLEX database: https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=48055.
 - Khindria, P. 2022. "Malaysia: Changes to Employment Act What to Expect in 2023." Wolters Kluwer. November 30. https://www.wolterskluwer.com/en-my/expert-insights/changes-to-employment-act-what-to-expect-in-2022.
- Segaran, C. 2022. "International Human Rights Requirements in the Workplace and Its Reception in Malaysia." The Planter 98 (1150). doi:10.56333/tp.2022.002.
 - See also the ILO NATLEX database, which lists relevant provisions by category of protection: https://www.ilo.org/dyn/natlex/natlex4.countrySubjects?p_lang=en&p_country=MYS.
- 62 Gottwald, 2018, "Certifying Exploitation: Why 'Sustainable' Palm Oil Production Is Failing Workers."
- Puder, J. 2019. "Excluding Migrant Labor from the Malaysian Bioeconomy: Working and Living Conditions of Migrant Workers in the Palm Oil Sector in Sabah." Austrian Journal of South-East Asian Studies, July, 31-48 Pages. doi:10.14764/10. ASEAS-0012.
- 64 ILO and UN Women. 2019. Public Attitudes towards Migrant Workers in Japan, Malaysia, Singapore and Thailand. Bangkok: International Labour Organization and UN Women Regional Office for Asia and the Pacific. http://www.ilo.org/asia/publications/WCMS_732443/lang--en/index.htm.
- Freeman et al., 2021, "At the Limits of 'Capability': The Sexual and Reproductive Health of Women Migrant Workers in Malaysia.
- Ratha et al., 2022, "Migration and Development Brief 36: A War in a Pandemic Implications of the Ukraine Crisis and COVID-19 on Global Governance of Migration and Remittance Flows." Notably, Malaysia is also a significant recipient of remittances, totalling USD 1.6 billion in 2021.
- 67 See also Mohiddin, D.N.A. and D.E. Pebrian. 2021. "Exploring Mechanization Degree and Capacity in Malaysia's Oil Palm Plantations." Agricultural Engineering International: CIGR Journal 23 (2). https://cigrjournal.org/index.php/Ejounral/article/view/6075...
- Veza, I. et al. 2021. "Effect of COVID-19 on Biodiesel Industry: A Case Study in Indonesia and Malaysia." International Journal of Automotive and Mechanical Engineering 18 (2). doi:10.15282/ijame.18.2.2021.01.0657.
 - Kuen, Y.L. 2020. "Pandemic Worsens Labour Shortage in Plantations." The Star, June 22. https://www.thestar.com.my/business/business-news/2020/06/22/pandemic-worsens-labour-shortage-in-plantations.
- 69 This is the focus of the Adaptation Without Borders partnership, co-led by the Stockholm Environment Institute. For an introduction to transboundary adaptation issues in Asia, see: Hocquet, R. 2020. "Transboundary Impacts of Climate Change in Asia: Making a Case for Regional Adaptation Planning and Cooperation." Adaptation Without Borders, October 6. https://adaptationwithoutborders.org/knowledge-base/transnational-climate-impacts/transboundary-impacts-of-climate-change-in-asia.
- 70 ILO. 2019. "General Principles and Operational Guidelines for Fair Recruitment and Definition of Recruitment Fees and Related Costs." Geneva: International Labour Organization. http://www.ilo.org/global/topics/labour-migration/publications/WCMS_536755/.
- 71 Chan, D. 2022. "Ismail Sabri: Govt Has Identified Three Actions to Prepare for Climate Change, Boost Public Health." New Straits Times, June 21. https://www.nst.com.my/news/nation/2022/06/806976/ismail-sabri-govt-has-identified-three-actions-prepare-climate-change.
- Pottler, M. et al. 2021. "Migrant Worker Guidelines for Employers." Geneva: International Organization for Migration. https://publications.iom.int/books/migrant-worker-guidelines-employers.
- See Section 10 in: Wickramasekara, 2020, "Malaysia: Review of Admission and Recruitment Practices of Indonesian Workers in the Plantation and Domestic Work Sectors and Related Recommendations."
- Solidar Suisse. 2019. "Exploited and Illegalised: The Lives of Palm Oil Migrant Workers in Sabah." Zurich. https://solidar.ch/wp-content/uploads/2021/03/palmoel_report_2019_e_web.pdf.
- Wickramasekara, 2020, "Malaysia: Review of Admission and Recruitment Practices of Indonesian Workers in the Plantation and Domestic Work Sectors and Related Recommendations."



International Organization for Migration (IOM)

Regional Office for Asia and the Pacific

18th Floor Rajanakarn Building, 3 South Sathorn Road, Sathorn, Bangkok 10120 Thailand

Tel: +66 2 343 9300 | Web: roasiapacific.iom.int

Email: mediathailand@iom.int