

Labor Migration and Climate Change Adaptation


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Social scientific evidence suggests that labor migration can increase resilience to climate change. For that reason, some have recently advocated using labor migration policy as a tool for climate adaptation. This paper engages with the normative question of whether, and under what conditions, states may permissibly use labor migration policy as a tool for climate adaptation. I argue that states may use labor migration policy as a tool for climate adaptation and may even have a duty to do so, subject to two moral constraints. First, states must also provide acceptable alternative options for adaptation so that the vulnerable are not forced to sacrifice their morally important interests in being able to remain where they are. Second, states may not impose restrictive terms on labor migrants to make accepting greater numbers less costly for themselves because doing so unfairly shifts the costs of adaptation onto the most vulnerable.

In rural Ethiopia, smallholding farmers are battling with droughts of increasing frequency and intensity. Ethiopian smallholders have developed a range of methods for managing drought risks, such as diversifying crops and participating in the collective risk-sharing practice of *iddir* (Aredo 2010; Porter 2012). The adverse impacts of climate change, however, are stretching the capacity of these risk-management strategies. Changes in temperature and precipitation associated with climate change have significantly detrimental effects on crop yields in Ethiopia (Deressa and Hassan 2009). The evidence suggests that existing strategies of risk-management are insufficient in the face of newer, “extreme” rainfall shortages (Porter 2012, 1216).

One alternative to these traditional risk-management strategies is labor migration. When members of a household engage in labor migration, they can generate an additional, stable stream of income through remittances. In Ethiopia, the greater the risk of food insecurity, the more likely it is that community members will migrate abroad to assist relatives (Ezra and Kiros 2001). The case of Amina, a smallholder in South Wollo, is illustrative:

Amina is 60 years of age and owns two oxen, nine other cattle, and 15 shoats ... She and her husband (who died around 1996) lost most of their cattle in the 1983–84 drought but were able to rebuild by the late 1980s. During the 1983–84 drought she sent two children (sons) to neighbouring Djibouti to work and one of them still sends cash remittances. Amina depends heavily on this source of cash, to buy food and livestock ... In the post-drought period of 2000 to 2003 she was able to increase herds from 13 to 15 cattle and three to 23 sheep, and actually was better off in 2003 than in 1997. (Little et al. 2006, 217)

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Here, labor migration enabled Amina’s household to diversify its sources of income and invest in productive assets.

This pattern is not unique to the case of Ethiopia. Around the world, those who rely on their environment for their livelihoods or subsistence face growing threats from the impacts of climate change. Climate change impacts are detrimental to livelihoods, lead to food insecurity, exacerbate inequalities, worsen existing poverty, and trigger new poverty traps (IPCC 2014, 796–7). A key part of the project of tackling climate change is facilitating *adaptation* so that such harmful outcomes can be avoided.

Recently, some academics, policy makers, and international institutions have suggested that international labor migration should be promoted as a strategy of adaptation to climate change (Asia Development Bank 2012; Black, Adger, et al. 2011; de Moor 2011; Webber and Barnett 2010). As the case of Amina—and a growing body of social scientific evidence—shows, labor migration can make it possible for some people living in precarious environments threatened by climate change to survive, and perhaps even to thrive. Advocates of using labor migration policy as a tool for climate change adaptation argue that if high-income states were to open their borders to more labor migrants from regions affected by climate change, then the most vulnerable would be better-placed to protect themselves against its worst outcomes.

This paper examines the prospects and pitfalls of using labor migration policy as a tool for climate change adaptation. Paul Baer (2006, 131) distinguishes two central questions about justice in climate change adaptation: “what actions should be taken to prevent or reduce harm to be caused by anthropogenic climate change, and who should carry the costs of those actions?” This paper engages with both of these questions through an analysis of the normative question of whether, and under what conditions, states may permissibly use labor migration policy as an instrument of climate change adaptation.

I argue that states may permissibly use labor migration policy as a tool for climate change adaptation and

that they may even have a duty to do so in some contexts, but that they are subject to two important moral constraints. The first constraint relates to the *voluntariness* of labor migration. If states are to use labor migration as a tool for climate adaptation, then they must also provide acceptable alternative options for adaptation that enable those who do not wish to migrate to adapt where they are. This is so that those vulnerable to climate impacts are not forced to migrate and thereby to sacrifice their morally significant interests in being able to remain where they are. The second constraint relates to the *fairness* of labor migration. Receiving states may not impose restrictive terms on would-be migrants to make accepting greater numbers of labor migrants less costly for themselves. This is because in the context of climate change adaptation, offering such terms represents an unfair attempt to shift the costs of adaptation onto the most vulnerable.

In making these arguments, the paper brings together two literatures in political theory, the climate justice literature and the migration justice literature, in a new way.¹ The paper draws on existing arguments in the migration justice literature about immigration and poverty but shows that the context of climate change alters the moral landscape of such debates—in particular, by making it possible to reach fairly strong conclusions on the basis of only fairly minimal normative commitments. The paper also draws on arguments about fairness in distributing the costs of tackling climate change but shows that such arguments have further reach than is sometimes assumed—in particular, they are relevant not only for disagreements about how entitlements to emit should be distributed but can also be “integrated” into debates in other domains, such as migration policy (Caney 2012). The paper thus not only confronts an important practical problem but also sheds theoretical light on the ways in which different issues in global justice relate to each other.

The form of migration that I focus on here—international labor migration—is only one part of the broader phenomenon of climate-related migration and displacement. The evidence suggests that most migration relating to climate change will take place within state borders (Pigué, Pécoud, and de Guchteneire 2011). Researchers have also distinguished a number of different ways in which climate change may drive migration and displacement, which include extreme weather events that cause reactive displacement; factors such as sea level rise that gradually make villages, cities, and perhaps even entire small island states uninhabitable; and pressures on resource and food security that amplify existing sources of political instability and conflict (Kälin 2010). Each of these different forms of migration and displacement are likely to raise different moral considerations from those that arise in relation to international labor migration.

The reason I focus on international labor migration here is twofold. First, the extent of other forms of

climate-related migration and displacement will depend not only on the nature, severity, and scale of climate change impacts that unfold over time but also on the opportunities for international migration that are made available in the first place. Fewer opportunities for international labor migration may mean that more of those affected engage in internal migration instead, or a lower adaptive capacity may lead to more displacement resulting from climate change. Therefore, it is important to know what opportunities *should* be made available in the first place. Second, international labor migration raises important questions about the duties of states in the international order and merits critical attention even if it ultimately represents only a small share of all climate-related movement.

I also make two background assumptions in the arguments that I develop. First, I assume what Joseph Carens (2013, 11) calls the “conventional view” on immigration: that “states are morally free to exercise considerable discretionary control over the admission and exclusion of immigrants.” This right is not unlimited—states may be required to admit some persons, such as refugees—but until such limitations are established, I assume that states have a discretionary right to exclude would-be immigrants. Second, I assume that states have duties to facilitate adaptation to climate change as part of a collective international project of tackling climate change. States’ primary duties are to prevent adverse climate change impacts from occurring by engaging in mitigation—and the more mitigation we undertake, the less adaptation will be required—but some adverse climate change impacts are already occurring, and some are locked in due to the inertia of the climate system. This means that adaptation will be part of any plausible attempt to tackle climate change (Caney 2010, 204).

I adopt these assumptions because it is against the background of these assumptions that moral questions concerning the justifiability of labor migration policy as an instrument of climate change adaptation arise. If states were morally required to adopt an open-borders policy or had no duties to facilitate adaptation to climate change, then whether or not they may permissibly discharge their duties to facilitate adaptation to climate change by expanding opportunities for labor migration would be a moot point. These assumptions also reflect widely shared normative commitments in the contemporary international order—or at least normative commitments that states often profess. Adopting these background assumptions thus helps us to navigate the normative questions about climate change and labor migration that confront us in the here-and-now.

First, I set out the proposal for using labor migration policy as a tool for adaptation and the social scientific evidence that underpins that proposal. Then, I argue that states may discharge their duties to facilitate adaptation by expanding opportunities for labor migration, and they may even have a duty to do so, but that they must also provide acceptable alternative options for adaptation *in situ*. Finally, I argue that states may not

¹ For overviews, see Moellendorf (2015) and Fine (2013) respectively.

offer restrictive terms to labor migrants when labor migration is used as a tool for climate adaptation.

LABOR MIGRATION POLICY AS A TOOL FOR CLIMATE CHANGE ADAPTATION

Climate change adaptation, in the most generic sense of the term, is simply “the process of adjustment to actual or expected climate and its effects” (IPCC 2014, 5). This could cover a broad range of actions such as the construction of levees and sea walls, the subsidization of flood insurance, the development of early warning systems for typhoons, and so on. But one common strategy of climate change adaptation is to make those who face those effects more *resilient*—that is, better able to protect themselves against the harms associated with climate impacts (see Folke 2006).

We know that differences in vulnerability to climate harms are widely attributable to socioeconomic status and that those in poverty are especially at risk of harmful outcomes (IPCC 2014, 6–8). Therefore, one way to make people more resilient is to make them better off. Those who are better off are often able to leverage the resources that they have available to them to avoid the harms of climate impacts—for example, by using capital to invest in irrigation systems that make them less dependent on particular patterns of rainfall. Indeed, one of the reasons why poverty and disadvantage are so troubling is that they inhibit our ability to enjoy secure “functionings” under conditions of risk and insecurity (Sen 1999, 87–110; Wolff and De-Shalit 2007, 63–73). This link between poverty and vulnerability helps to explain why climate adaptation goals often overlap with broader development and poverty eradication goals (Ayers and Dodman 2010; Schelling 1992).

We have clear evidence that labor migration from low- to high-income states is effective in reducing poverty (Oberman 2015). At the household level, labor migration can work as a strategy for increasing incomes and spreading risk. Those who move from a low- to a high-income state can increase their own income, and the remittances they send to family members can make them better off, free up resources for investment in productive assets, and provide a stable income stream (Massey et al. 1993; Stark 1991; Stark and Bloom 1985). Remittances may also indirectly benefit nonmigrant households—for example, by stimulating local economic activity (Taylor 1999). Temporary and “circular” forms of labor migration are often particularly effective in promoting poverty reduction and development, partly because migrants who plan on returning tend to remit a higher proportion of their income (Dustmann and Mestres 2010).²

Of course, labor migration is not a silver bullet for poverty reduction and development, and it does raise some important concerns. Some concerns, such as

concerns that remittances are largely spent on conspicuous consumption rather than development, are often overstated (De Haas 2005, 1274–5; Oberman 2015, 242–3). But one important concern is that the emigration of those with highly valued skills or who provide important care services may create a “brain drain” (Docquier and Rapoport 2012) or “care drain” (Isaksen, Devi, and Hochschild 2008) among those who stay behind. This is a real concern, especially in certain sectors and contexts, but as a general phenomenon it is less widespread than is often assumed (de Haas 2005, 1272–3). Skilled emigration is also often accompanied by a “brain gain” (Stark, Helmenstein, and Prskawetz 1997), where remittances enable investments in education or where returning migrants share knowledge. There is also a range of policies—such as raising domestic salaries for skilled workers, encouraging diasporic networks, and investing in the provision of institutional care services—that can limit the costs of brain and care drain without sacrificing the benefits of migration (Gheaus 2013, 15–20; Kapur and McHale 2005).

These results give us good reason to believe that labor migration can function as a mechanism of climate change adaptation (Bardsley and Hugo 2010; Gemenne and Blocher 2017; Tacoli 2009). Those who are vulnerable to climate impacts are often vulnerable because of their poverty and disadvantage, so we can expect that if labor migration helps to alleviate poverty and disadvantage, then it will also help to make people more resilient to climate impacts. The direct relationship between labor migration and resilience to climate impacts has been studied less extensively than the relationship between migration and development, but studies in Ethiopia (Gray and Mueller 2012), Vietnam (Adger et al. 2002), Mexico (Hunter, Murray, and Riosmena 2013), the Philippines (Yang and Choi 2007), across South Asia (Maharjan et al. 2020), and in cross-national contexts (Warner and Afifi 2014) have all demonstrated that labor migration can have this adaptive function, at least in some circumstances. These results are not unambiguous, but overall, they lend support to the idea that labor migration can work as a strategy of adaptation to climate change. Researchers working on the climate-migration nexus increasingly argue that migration is a form of climate adaptation, precisely because it can make those vulnerable to climate change impacts more resilient (Black, Bennett, et al. 2011; McLeman and Smit 2006).

As a result of this body of social scientific evidence, some have argued that high-income states should expand opportunities for labor migration in order to promote adaptation to climate change. In a report for the World Bank, Michael Webber and Jon Barnett (2010, 32) have argued that developed states should enable the adaptive function of labor migration by reducing barriers to entry, recruiting from among those vulnerable, reducing the transaction costs of remittances, and providing housing and employment assistance to labor migrants. Similarly, the Asia Development Bank (2012, 72–3) stresses that “international migration can play a key role in fostering the

² “Circular” migration here refers to iterated forms of temporary migration.

resilience of households and communities.” They recommend that governments negotiate regional or bilateral freedom of movement agreements and expand opportunities for both permanent and temporary labor migration. In a report for the UK government, Richard Black, Adger, et al. (2011, 175–6, 183–5) have recommended that circular migration schemes between low- and high-income countries be expanded and that labor migration policies support those most at risk of being “trapped” in place due to environmental changes and poverty.

Under all of these proposals, high-income states would open their borders to greater numbers of those most vulnerable to climate change impacts in order to promote the resilience of their households and communities. We can expect that individuals who take up opportunities for labor migration would remit a portion of their increased income to their families and communities, enabling them to better protect themselves from the adverse consequences of climate change—though no labor migrant would be obliged to do so. The most defensible versions of the proposal will also involve high-income states adopting more active policies—such as encouraging recruitment from climate-vulnerable areas, financing skills training programs, providing housing and employment assistance to labor migrants, paying for travel costs, and capping fees on remittance transfers—to promote the adaptive function of labor migration. They will also require receiving states to finance policies that limit the effect of brain or care drain where that is a concern, so that significant costs are not imposed on stayee communities.³ Different configurations of policies will likely be appropriate in different contexts, depending on (among other things) the different dynamics of labor markets in receiving states and communities affected by climate change and the extant policy frameworks that regulate labor migration. And different configurations will also be more or less demanding for the receiving state, depending on the costs that they impose. But in general, these more demanding policy packages promise to better fulfill states’ duties to facilitate adaptation to climate change.

In order to serve the purpose of facilitating adaptation to climate change, labor migration policies would also need to be targeted toward communities that are vulnerable to climate change impacts and stand to benefit from labor migration. The empirical evidence suggests that climate change impacts are often intertwined with preexisting social, economic, demographic, environmental, and political drivers of migration in complex ways, which means that it is difficult to identify particular individuals whose migration can be attributed to climate change (Black, Kniveton, and Schmidt-Verkerk 2011; McLeman and Hunter 2010). This means that it would be unwise to make eligibility for labor migration

programs conditional on individuals proving that they need to move because of climate change, as such a requirement would be effectively impossible to meet. A more promising approach would be to identify and target particular geographical and sectoral “hotspots” for climate pressures that could be alleviated through labor migration (De Sherbinin 2014). Such an approach may prove to be overinclusive in some cases, but labor migration has three important advantages that should negate any concerns about overinclusivity.

First is that labor migration is likely to be a particularly effective tool for adaptation. The resources that labor migration can generate are significant in scale—the World Bank estimates that remittance flows are three times higher than official development assistance (World Bank 2016, 17)—and translate into significant reductions in poverty (Adams and Page 2005). If those benefits travel to the context of adaptation—as we have good reason to expect them to, given the similar causal mechanisms at work—then they are likely to be similarly significant (Gemenne and Blocher 2017, 342–3). Labor migration may also be less likely to be maladaptive than other interventions. Top-down adaptation interventions are often maladaptive because of phenomena such as elite capture and inequitable participation in planning (Eriksen et al. 2021). Labor migration decisions taken at the household level are a form of bottom-up “autonomous adaptation,” which means that they may be less liable to becoming maladaptive in this way (Fankhauser, Smith, and Tol 1999).

Second is that labor migration is likely to be a particularly cheap strategy of adaptation. It costs little to open borders to those vulnerable to climate impacts, and even the more demanding elements of the proposal are likely to be relatively low in cost compared with other adaptation measures such as climate-proofing infrastructure (Narain, Margulis, and Essam 2011, 1009). In fact, the costs may even prove to be negative because states often derive benefits from opening their borders to labor migrants, who may fill skill shortages in the host state’s labor market or sustain an ageing population (Asia Development Bank 2012, 55; Black, Adger, et al. 2011, 183–4). Thus, proponents of labor migration often describe it as a “win-win” or “triple-win” strategy, given that it will often benefit migrants, sending states, and receiving states (Black, Adger, et al. 2011, 183; de Moor 2011, 13–5).⁴

Third is that labor migration is likely to be a “no-regrets” form of climate adaptation (Heltberg, Sigel, and Jorgensen 2009). As we have seen, labor migration from low- to high-income states can help to achieve other morally important goals, such as development and poverty alleviation. Of course, a labor migration policy that is tailored toward climate change adaptation may look quite different from a labor migration policy that is tailored toward poverty alleviation or

³ In contexts where the costs of brain or care drain cannot be effectively limited, then this should count against the proposal and may even make it impermissible. This only limits the scope of labor migration, however, rather than undermining the proposal altogether.

⁴ This does not mean that it will not lead to some costs within the state. But where those costs fall unevenly, redistributive policies can also be used to ensure that the least advantaged do not suffer disproportionate burdens.

development, given the different goals of such policies and the moral constraints that arise in the context of climate change adaptation. But this feature of labor migration means that even if it is overinclusive or proves to be ineffective in reducing vulnerability to climate change in some contexts, it is nonetheless likely to yield significant benefits in these other domains.

THE PLACE OF LABOR MIGRATION IN CLIMATE CHANGE ADAPTATION

If labor migration policy can function as a tool for adaptation, as the evidence appears to suggest, then it is important to know what role it should play within the project of adaptation to climate change. In answering this question, it is instructive to turn to an analogous debate about the role of labor migration policy in the project of tackling global poverty. This debate provides a useful entry point for our analysis, but as we will see, the context of climate change alters its moral terrain.

Political theorists tend to agree that there is a duty to alleviate global poverty, though many disagree about the grounds, character, and extent of that duty. In debates about the relevance of this duty for immigration policy, Kieran Oberman (2011; 2015) has argued that states may not permissibly use immigration policy as a means of addressing global poverty because doing so would involve violating a “right to stay” held by those who would need to migrate in order to alleviate their (or their household’s) poverty. As Oberman (2011, 258–60) points out, we often have a powerful interest in remaining where we are, which is underpinned by at least three values: freedom of movement (including the freedom *not* to move), cultural membership, and the attachments that we have to the territory in which we live. These values capture the importance of our ties to the people and places that are significant in our lives. If we use immigration policy to address poverty, then we force people to migrate in order to alleviate their poverty and thereby to sacrifice these morally important interests, which amounts to a violation of their right to stay.

If Oberman is right, then something similar could be said of using labor migration policy as a tool for climate change adaptation: using labor migration policy as a tool for climate change adaptation is impermissible because it violates the rights to stay held by those vulnerable to climate impacts. Here, however, I argue that this conclusion does not follow from a closer examination of Oberman’s argument. Oberman’s argument can be upheld in the context of climate adaptation. But properly understood, it does not rule out using labor migration policy as a tool for climate adaptation.

In its original context, Oberman’s argument relies on a claim that is likely to be controversial: that high-income states discharging their duty to alleviate poverty abroad are constrained by the right to stay. To say that this claim is likely to be controversial is not to say that it is incorrect—I remain agnostic on that point here—but it is nonetheless important to draw out this feature of Oberman’s argument because it bears on

the prospects for the success of his argument when applied to the context of climate change adaptation. Although Oberman’s argument faces an important challenge in its original context, that challenge does not arise within the context of climate change adaptation, which means that it can be upheld.

The basic interests that Oberman argues underlie the right to stay—freedom of movement, cultural membership, and territorial attachment—clearly have significant moral weight. In my view, Oberman is right to suggest—as theorists of territorial rights have recently pointed out—that we have powerful and nonsubstitutable interests in being able to remain in the places where we form and pursue our life plans (Draper 2021; Moore 2015, 36–46; Stilz 2019, 33–59). The important question for our purposes, however, concerns what duties those interests impose on would-be admitting states. For Oberman, the right to stay is a *human right*, which is violated when people have no reasonable alternative apart from migrating (Oberman 2011, 258; 2015, 246–7). He takes this to mean that all states, including those contemplating how to discharge their duties to the global poor, have positive duties to ensure that the right to stay is fulfilled (Oberman 2015, 260–2).

For some political theorists, however, Oberman’s claim that these interests ground a human right will appear too strong, at least if a “human right to stay” means that outsiders are under a positive duty to enable those in poverty to stay where they are rather than a mere negative duty not to expel or remove them. On at least some views, there is an important “division of labor” between states when it comes to human rights protection (Beitz 2009, 106–17). In the first instance, states are responsible for protecting and fulfilling the human rights of their own members. The failure of a state to protect and fulfil the rights of its members is a matter of “international concern” that may give rise to *pro tanto* duties on the part of the international community to act—for example by assisting states that lack capacity (Beitz 2009, 109). But other states in the international order are not themselves required to protect and fulfil the rights of citizens abroad—only to *respect* those rights by not violating negative duties that stem from them (Blake 2020, 70–1). If we adopt this view, then states that offer those in poverty an opportunity to migrate in order to alleviate their poverty do not violate the right to stay. Those in poverty are *already* in a situation where they do not have any reasonable options, after all. States that offer those in poverty the opportunity to migrate do not, in so doing, create or exacerbate the conditions of poverty facing the would-be migrant. So, they do not abrogate a negative duty that stems from the right to stay by offering opportunities to migrate.

Still, we might think that if states have a duty of *justice* to alleviate poverty, they must discharge that duty in ways that pay due regard to the interests of the global poor. If states are to discharge their duties of justice to the global poor, they should do so in ways that do not require the global poor to sacrifice some morally important interests, such as their interests in staying

where they are. After all, duties of justice are duties to give their beneficiaries something that they are owed by right, not duties that can be made conditional on their beneficiaries sacrificing other morally important interests. Even if the right to stay is not a human right, or even if a human right to stay does not entail that states have positive duties to enable the global poor to stay where they are, the fact that poverty alleviation is a duty of justice means that states must discharge that duty in a way that does not require the global poor to sacrifice morally important interests.

This response explains why rich states may not require the global poor to sacrifice their interests in staying where they are, but it leaves Oberman's argument open to an important challenge. This challenge comes from those who claim that our duties to the global poor are only duties of justice, rather than duties of charity, when we are *responsible* for their plight (Miller 2007, 247–9; Valentini 2013). The distinction between duties of justice and duties of charity is itself a matter of disagreement, but one popular gloss is that duties of charity are imperfect duties, meaning that we have some discretion about when and how they are to be performed, and they do not provide grounds for complaint when they are not discharged (Buchanan 1987). If we take this view, then, at least where they are not responsible for it, rich states should enjoy some discretion about how to discharge their duties to alleviate global poverty. The poor do not have grounds for complaint if rich states only offer them opportunities to alleviate their poverty through migration, as their poverty alleviation is not something that is owed to them by rich states as a matter of justice.

If these two claims—first, that states do not violate the human right to stay by offering opportunities for migration, and second, that states are entitled to exercise discretion about how and when to discharge their duties to the global poor—are correct, then states may well be morally permitted to choose to address global poverty through immigration policy (and only through immigration policy). That being said, it remains an open question whether Oberman's argument ultimately succeeds or fails because there are important counterarguments available to him. For instance, he might argue that using immigration policy to tackle global poverty goes beyond the limits of the discretion that imperfect duties afford us. Or he might contest the claim that we only have duties of justice to the global poor when we are responsible for their plight. Or he might argue that rich states *are* responsible for global poverty, at least in many cases—perhaps because of the history of colonial exploitation that has structured development processes (see Acemoglu, Johnson, and Robinson 2001) or the role of rich states as “rule-makers” in a global economic order that keeps some states chronically underdeveloped (Pogge 2002).⁵ The important point here is not the ultimate success of Oberman's argument but rather that it is open to contestation on the grounds that the would-be

admitting states are not responsible for the conditions of poverty that face the global poor.

This is important because in the case of climate adaptation, it is not plausible to maintain that the would-be admitting states do not bear responsibility. It is a basic feature of adaptation that it only arises as a need in response to the threats and risks associated with climate change, which are produced collectively by the actions of high-emitters (Paavola and Adger 2006). Unlike in the case of poverty, there is no real empirical debate to be had about whether the causes of the need for adaptation are endogenous or exogenous. Those most vulnerable to climate change are, by and large, those least responsible for it—Stephen Gardiner (2011, 31) calls this the fact of “skewed vulnerabilities”—which means that those who need to adapt to climate change are responding to conditions imposed upon them by others. The upshot of this is that the moral duty to facilitate adaptation to climate change is a duty of justice, not a duty of charity, *even* on those views that maintain that we only have duties of justice when we are responsible for the plight of those who need our assistance. Whatever its prospects for success in the case of poverty, when it is applied to the case of climate change adaptation, Oberman's argument can be upheld. In the context of climate change, then, this fairly strong conclusion can be reached on the basis of only fairly minimal commitments about the requirements of global justice.

To get a full sense of what this implies for the proposal to promote labor migration as a strategy of climate change adaptation, however, we need to distinguish between a strong and a weak interpretation of Oberman's argument. At some points, Oberman makes the strong claim that it is impermissible for states to use immigration policy as a tool for poverty alleviation at all, at least where there are possible alternatives. He writes, for example, that “immigration should not be used to address poverty when there are alternatives available” (Oberman 2015, 248). At other points, however, he makes the weaker claim that it is impermissible for states to structure the options available to the global poor such that they have no reasonable poverty-alleviating alternatives to migration. For example, he claims that “a migration-based approach to global poverty *that does not seek to assist desperately poor people in their home state ... violates the human right to stay*” (Oberman 2011, 260, emphasis added) and that “when rich states rely on migration to address poverty, *instead of searching for alternatives*” (Oberman 2015, 247, emphasis added) they violate the right to stay.

These claims are importantly different, and only the weaker claim follows from Oberman's argument. The right to stay imposes constraints on the behavior of would-be receiving states, but it does not always rule out using immigration policy to tackle global poverty. This is because of the sense in which the poor are forced to migrate. They are forced to migrate not in the sense that they are subject to direct threats of coercion but rather in the sense that they *lack acceptable alternatives* to migration (Oberman 2011, 260). Those who are put

⁵ Oberman (2011, 262) himself points toward this latter strategy.

in a position where they must migrate in order to alleviate their poverty have no effective choice but to do so. Now, strictly speaking, it is possible for a would-be migrant to choose to migrate voluntarily *even if* they lack acceptable alternatives if the reason that they choose to migrate is not *because* they lack acceptable alternatives (Olsaretti 2004, 138–9). But unless would-be migrants have acceptable alternative options, we cannot know whether or not they would have otherwise chosen to migrate. The criterion that there should be acceptable alternatives thus provides an important “political” and publicly verifiable standard for judgements about when migration is forced (Ottonelli and Torresi 2013, 792–801).

The upshot of this is that Oberman’s argument does not rule out using labor migration policy as a tool for climate adaptation. It only means that states must *also* provide acceptable alternative options such that the vulnerable are not forced to migrate to successfully adapt. So long as states provide acceptable alternative options that enable the vulnerable to stay where they are if they so choose, they can permissibly also offer opportunities to migrate. In other words, the right to stay only rules out making adaptation *conditional* on taking up opportunities for labor migration. It is violated when states structure the options available to the vulnerable such that they do not have acceptable alternatives to migration that enable them to adapt where they are. But this does not rule out using labor migration policy as one tool among many in the project of climate adaptation. This is important because some of those affected may actually prefer to take up opportunities for labor migration rather than to stay where they are. For many would-be migrants, what Ottonelli and Torresi (2012) call a “migration project” is a central part of a broader life plan. Adopting labor migration policies that seek to address vulnerability to climate change, among other alternatives, could be one way of enabling such projects.

Of course, exactly when the alternatives are “acceptable” is difficult to establish. For one thing, there are a variety of different adaptation interventions that may be relevant to contexts in which labor migration is a viable option—such as encouraging crop diversification, expanding employment opportunities, putting in place social safety nets, expanding access to credit, and even direct cash transfers—and the heterogeneity of climate impacts and the circumstances of vulnerable communities make it difficult to determine in the abstract which options are appropriate. For another, different theories of justice in adaptation will set different normative standards for adaptation policy: for example, they will tell us whether adaptation must protect certain capabilities, meet certain standards of procedural justice, make those vulnerable to climate impacts as well-off as they would have been in the absence of climate change, and so on (see Heyward 2017).

Even in the absence of such a theory, however, we can establish a rough critical standard for judgements about when alternatives are acceptable. Alternative adaptation options need not be *fully* just—only

sufficiently just—for us to treat labor migration decisions as voluntary decisions and thus for using labor migration policy as a tool for adaptation to be permissible. A standard of full justice is far too demanding as a general standard for assessing the voluntariness of decisions; such a standard would render all decisions made against a background of injustice involuntary, which—if we believe that contemporary societies involve widespread injustices—would effectively render all decisions involuntary (Ottonelli and Torresi 2013, 798–800). This implication is highly implausible and should lead us to adopt a more minimal standard for making judgements of voluntariness. Ottonelli and Torresi (2013, 800) and Serena Olsaretti (2004, 140) both suggest a standard of basic needs. In my view, we should understand “basic needs” fairly capaciously here so as to count as involuntary cases where decisions are made to avoid having to sacrifice morally important interests—interests such as preserving family and community ties, cultural membership, and so on—rather than merely survival needs.⁶ This standard captures the sense in which those who are put in a position where they must choose between sacrificing such morally important interests and foregoing successful adaptation to climate change are “forced” to migrate. On this standard, states must ensure that there is some alternative option available to would-be migrants that does not require them to sacrifice any basic needs, understood in these broad terms.⁷

Where does this leave us with respect to the place of labor migration policy in climate change adaptation? Labor migration policy, we know, can be an effective tool for adaptation. But Oberman’s argument shows that states cannot permissibly use *only* labor migration policy to facilitate adaptation to climate change. Doing so would fail to pay due regard to the morally important interests that those vulnerable to climate change have in remaining in place. This does not rule out using labor migration as a tool for climate change adaptation—but it means that if labor migration is to be used as a tool for climate change adaptation, then those vulnerable to climate change must be offered alternative opportunities for adaptation *in situ* that do not require them to sacrifice morally basic interests.

Beyond this, however, I also want to make a more tentative, positive claim: that high-income states are not *only permitted* to use labor migration policy as a tool for climate change adaptation (so long as they also provide *in situ* alternatives) but further that they may have a *duty* to do so, at least in some circumstances. The justification for this claim stems from the fact that, as we have seen, labor migration may be a particularly

⁶ My argument is consistent with those vulnerable to climate change being required to sacrifice some less basic interests in order to adapt to climate change. I leave open the question of precisely where the boundaries should be drawn here.

⁷ Adopting this standard does not mean that we should not work toward full justice in adaptation, only that we should not treat decisions made in the absence of full justice as involuntary.

cheap and *effective* form of adaptation to climate change.

If we assume that the overall budget for adaptation is limited, then it seems reasonable to suggest that adaptation interventions should be designed to be cost-effective, in the sense that the overall package of adaptation interventions that we adopt should be targeted toward the maximal fulfilment of our duties of justice to facilitate adaptation. Given that labor migration appears to be a particularly cheap and effective form of adaptation to climate change, we can expect that it will take up relatively little of any overall budget for adaptation interventions while providing fairly significant adaptive benefits. The more opportunities for labor migration are taken up, the less need there will be for other more expensive and less effective forms of climate adaptation. Thus, in the context of a scarcity of adaptation finance, high-income states have a *pro tanto* duty to offer opportunities for labor migration as a form of adaptation to climate change. They have this duty because offering opportunities for labor migration will take up relatively little of the overall budget, so it will enable states to discharge more fully their more general duties to facilitate adaptation to climate change.⁸

It should be stressed, however, that the claim that states have a duty to use labor migration policy as a tool for climate adaptation claim depends on three conditions. First, it depends on the claim that labor migration is cost effective holding true. Given what we know about the way in which labor migration reduces poverty, the links between poverty alleviation and resilience to climate change, and the costs and pathologies of other forms of adaptation, we do have good reason to believe that labor migration will be cost effective. But ultimately, research on the direct relationship between labor migration and climate adaptation is still in its infancy, and further research will be needed to determine how confidently we can make this claim.

Second, it depends on the claim that other moral values do not override considerations of cost effectiveness. Cost effectiveness is an important consideration when it comes to selecting policies, but other moral values will also bear on which policies are acceptable. For example, we ought to ensure that policies targeted at ameliorating the condition of those affected by climate impacts do not express disrespect or compromise their standing as equals (Wolff 1998). It is for this reason that the duty to promote labor migration is only a *pro tanto* duty.

Finally, the third condition is that there is a scarcity of adaptation finance. The overall costs of adaptation are difficult to measure, but one review suggests that they are likely to be somewhere between \$25 billion

and \$100 billion per year, with some estimates being even less optimistic (Fankhauser 2010; Narain, Margulis, and Essam 2011). Although significant pledges for adaptation finance have been made—the international community has pledged \$100 billion annually through the Green Climate Fund—actual contributions have fallen significantly short. Only around \$10 billion has been contributed in total since the fund's inception in 2010 (Callies and Moellendorf 2021, 132), meaning there is a significant scarcity of adaptation finance.⁹

Of course, the scarcity of the overall budget for adaptation is not itself a fixed constraint but is rather an artifact result of the unwillingness of high-income states to contribute enough to adaptation finance. Regardless of their attitude toward using labor migration as a tool for climate change adaptation, states clearly have a duty to increase their contributions to adaptation funding such that they are able to discharge their duties of justice to those vulnerable to climate change impacts. But if states were willing to *radically* increase their contributions such that there was no longer a scarcity of adaptation finance at all, then perhaps it would be permissible for them to ignore considerations of cost effectiveness and exercise discretion about whether or not to offer opportunities for labor migration as a form of adaptation (at least on the assumption that states have a more general discretionary right to exclude).

If this is correct, then the duty that high-income states have is a disjunctive duty: they have a duty *either* to offer opportunities for labor migration as a form of adaptation (alongside *in situ* alternatives), borne of considerations of cost effectiveness that bind them within a context of scarcity, *or* to increase the overall budget for adaptation to a degree that they no longer need be constrained by considerations of cost effectiveness. But until and unless states do radically increase their contributions, they have at least a *pro tanto* duty to offer opportunities for labor migration as a form of climate change adaptation (alongside *in situ* alternatives).

FAIR TERMS FOR LABOR MIGRATION AS CLIMATE CHANGE ADAPTATION

If the foregoing arguments are correct, then labor migration policy may play an important role in adaptation to climate change. And as we have seen, labor migration is also likely to be attractive from the point of view of states that seek to fill labor shortages in key sectors or sustain an ageing population. But part of the reason that labor migration is attractive to receiving states is that they can impose restrictive terms on labor migrants, which ensure that they derive the benefits of labor migration without incurring associated costs. Receiving states may, for example, restrict migrant

⁸ An anonymous reviewer worries that it would be unfair if some states were able to discharge their share of adaptation duties through low-cost measures such as facilitating labor migration but others were not. However, if states' contributions to adaptation are judged not in terms of how much adaptation they facilitate but in terms of how much of the net costs of adaptation they bear—as most work on fairness in adaptation assumes—then admitting states would not be unfairly credited for a greater share of adaptation than others.

⁹ For up-to-date figures, see <https://www.greenclimate.fund/about/resource-mobilisation>.

workers' labor rights such that they are unable to join trade unions or change employer; restrict access to social rights such as social security, pensions, and public health care; and restrict access to family reunification (Lenard and Straehle 2011, 212–3; Ruhs 2013, 65–71).

This section examines whether it is permissible for states to impose restrictive terms on labor migration when it is used as a tool for climate change adaptation. I argue that receiving states may not restrict the rights of labor migrants in order to make labor migration less costly from their point of view. This is not because would-be migrants cannot voluntarily accept such terms but because, in the context of climate change adaptation, such restrictions represent an unfair attempt to shift the costs of adaptation onto the most vulnerable.

My focus here is on temporary labor migration in particular, for two reasons. First, temporary labor migration is particularly relevant for the context of climate change adaptation, as the climate impacts that generate the need for adaptation are often seasonal or intermittent in nature (Black, Adger, et al. 2011, 184; de Moor 2011, 8–9; Tacoli 2009, 520–1). Second, restrictive terms are often seen as most justifiable in the case of temporary labor migration, as permanent migrants are usually thought to acquire a claim to equal citizenship at least after some period (Carens 2013). If my argument can demonstrate that restrictions cannot be justified even in the case of temporary labor migration, then this gives us good reason to think that restrictions will be unjustifiable in other cases as well.

Empirical research on migration policy suggests that there is a trade-off between the rights that temporary migrant workers enjoy and the overall number of temporary workers that are accepted: the more expansive the set of rights, the lower the number of temporary workers (Ruhs 2013; Ruhs and Martin 2008). Given the contribution to poverty alleviation and development made by labor migration, some have argued that trade-offs between rights and numbers can be justified, though they vary in the trade-offs that they find acceptable. Eric Posner and Glen Weyl's rather extreme proposal is that we should "make the U.S. more like Qatar" and accept the existence of a "caste system" between migrant workers and citizens (Posner and Weyl 2014; see also Weyl 2018). Branko Milanovic makes the more moderate claim that some rights restrictions, including the introduction of lower tiers of citizenship, are justifiable (Milanovic 2016, 147–54). Perhaps the most modest version of the proposal comes from Martin Ruhs (2013, 172–6; see also Brock 2020, 156–64), who argues that some limited restrictions on means-tested benefits can be justified, that employment may be restricted to a particular sector (but not to a particular employer), and that rights to family reunion can be restricted if temporary migrants cannot meet a minimum earnings threshold.¹⁰

In my view, some restrictions are unlikely to be justifiable in any context because they expose temporary

workers to significant risks of abuse. Abuse is widespread within many temporary migration schemes—for example, live-in caregivers in Canada face wage theft and violence and construction workers in Gulf states under the Kafala system have their passports removed and are extorted for "debts" owed to recruitment agencies (Brickner and Straehle 2010; Brock 2020, 143–5)—and is facilitated by the fact that temporary migrant workers occupy a position of vulnerability (Anderson 2010; Lenard and Straehle 2010, 287–8). Some rights, such as core labor rights, will need to be safeguarded if temporary migrant workers are to be protected against abuses such as these (Brock 2020, 161–2).

We need not determine precisely which rights must be guaranteed here, however, because the claim that I defend here would preclude even more minimal restrictions. That claim is that in the context of climate adaptation, it is impermissible for states to restrict the rights of temporary workers in order to make accepting greater numbers less costly for themselves. I remain agnostic here on whether some trade-offs may be justified in other contexts, but in the context of climate adaptation, even more minimal trade-offs of the kind that Ruhs suggests cannot be justified.

Ordinarily, the debate about restrictions on the rights of temporary migrant workers focuses on whether temporary migrants can *voluntarily accept* the terms offered to them. Economists often appeal to the "revealed preferences" of temporary migrants who are willing to accept such terms (e.g., Milanovic 2016, 153; Rodrik 2011, 269). The problem with such an appeal is that the willingness of temporary migrants to accept such terms is often a result of the fact that the alternatives available to them—such as a life of desperate poverty—are so dire (Bertram 2019). As we have seen, this does not mean that it is not *possible* for choices to be made voluntarily. But against a background of unacceptable alternatives, it is unreasonable to interpret the willingness of labor migrants to accept such terms as an expression of voluntary choice. But in situations in which migration really is voluntary, perhaps would-be migrants can waive at least some rights. On Robert Mayer's view, for example, so long as would-be temporary migrants "negotiate from a position of sufficiency," then "yielding certain rights in exchange for better pay and adventure" is unobjectionable (Mayer 2005, 319).

How does this bear on the situation of those adapting to climate change? At first glance, it appears that those vulnerable to climate impacts are akin to those in poverty in that they need to migrate in order to ameliorate the dire conditions they face. Their choice is made against a background of unacceptable alternatives, so we cannot presume that it is voluntary. But if, as I have argued that they must, states provide real opportunities for adaptation *in situ*, then labor migrants would no longer be in circumstances where they lack acceptable alternative options. Under such conditions, perhaps those vulnerable to climate impacts really can voluntarily waive some rights. Temporary labor migration, even under restrictive conditions, may well be chosen voluntarily, given that for at

¹⁰ For other versions of this trade-off argument, see Bell and Piper (2005) and Rodrik (2011, 266–72).

least some would-be migrants, the migration project that figures in their life plan is explicitly temporary in character and oriented toward the home state rather than the receiving state (Ottonelli and Torresi 2012). The upshot of all of this is that where they have acceptable alternative options, it at least is possible that some of those adapting to climate change really could voluntarily accept restricted regimes of rights.

Whether or not restrictive terms are voluntarily accepted, however, is not the only basis on which we can determine whether they are unjust. Another standard is that of *fairness*. In my view, considerations of fairness better explain why it is impermissible for states to offer restrictive terms to temporary labor migrants, at least where temporary migration schemes are a tool for climate adaptation.

The duty to facilitate climate change adaptation is, as we have seen, a duty of justice that arises as a result of the actions of high-emitting agents who have brought about the problem of climate change. The costs of the duty to facilitate climate change adaptation, including through labor migration, should be shared on fair terms. Of course, what terms are “fair” is a matter of significant disagreement. Some argue that the costs of adaptation should be distributed according to historic responsibility for climate change (Baer 2006; Grasso 2010), some argue that they should be distributed according to ability to bear those costs (Moellendorf 2014, 186–9), some argue that they should be distributed according to a (qualified) beneficiary pays principle (Baatz 2013), and some argue that some kind of hybrid approach is appropriate (Jagers and Duus-Otterstrom 2008).¹¹

Fortunately, for our purposes, we need not settle these debates. This is because as a matter of midlevel principle, these competing views generate what Henry Shue (2015) has called a “core practical convergence” on who should bear the costs of adaptation. Of course, there will be some “peripheral theoretical divergence” (Shue 2015, 8) about exactly which states are required to bear which costs for adaptation, depending on which principle, or combination of principles, we adopt. But on any plausible conception of fairness, the high-income states that are candidates for accepting labor migrants will be required to bear the lion’s share of the costs—whether because of their disproportionate responsibility for climate change, the significant benefits they have derived from it, or simply their ability to bear those costs. Those most vulnerable to the impacts of climate change, by contrast, will be required to bear at most minimal burdens—whether because of their lack of responsibility for climate change, the relatively few benefits that they have derived from it, or their relative inability to bear those costs. This convergence is not accidental—it arises because contribution, benefit, and capacity often travel together: “those who contributed to the problem of excessive emissions thereby both benefitted more than others and became better able to pay than most others” (Shue 2015, 16).

According to one (admittedly somewhat crude) attempt to quantify how the burdens of adaptation should be shared on the basis of a combination of these principles, the Least Developed Countries should only be required to bear 1.8% of the costs of adaptation collectively, even on the conservative assumption that states should not be held responsible for emissions before 1990 (Dellink et al. 2009).

With this standard of fairness in mind, it is easy to see why states that offer restrictive terms to would-be migrant workers to reduce the burdens that they face act wrongly. By restricting the rights available to migrant workers, receiving states shift the costs of adaptation onto the most vulnerable, who must themselves bear significant costs—for example, the costs of the risk of facing unemployment without social insurance or the costs of using their own financial resources to support family members who would otherwise be eligible for public benefits. Given that states have duties to share the costs of adaptation on fair terms and that competing conceptions of fairness converge on the principle that high-income states should bear the overwhelming share of the costs of adaptation, shifting the costs of adaptation onto the most vulnerable is patently unfair. Note that this does not mean that those vulnerable to climate change impacts cannot be required to bear *any* costs—I leave open the question of precisely what costs they can be required to bear here. But imposing costs upon the least advantaged *in order that* the most advantaged can reduce their own burden violates the demands of any reasonable view of fairness. It would, to borrow a phrase from Shue (2014, 46), be akin to asking the poor to pawn their blankets so that the rich can keep their jewelry. Restrictive terms for labor migration as a form of adaptation can thus be ruled out on grounds of fairness.

CONCLUSION

This paper has examined a pressing normative issue that sits at the intersection of climate and migration justice: the role of labor migration in adaptation to climate change. First, I argued that states may permissibly use labor migration as a tool of climate change adaptation and that they may even have a duty to do so, but they must also offer alternative options for adaptation *in situ*. If they fail to do so, they force those vulnerable to climate change to take up opportunities for labor migration, thereby jeopardizing their morally significant interests in being able to remain where they are. Second, I argued that states may not restrict the rights of migrant workers in order to make accepting would-be migrant workers less costly from their point of view. These arguments not only help us to address an important practical problem but also illustrate the ways in which integrating different debates can shed greater theoretical light on the moral terrain of issues in global justice.

If the arguments that I have presented in this paper are correct, then the labor migration policies that meet standards of justice will look quite different from those

¹¹ For an overview of these debates, see Hartz-Nicholls (2011).

that have been proposed by international institutions, policy makers, and academics thus far. High-income states are likely to complain that labor migration policy as a tool for adaptation under such constraints will be costly—or at least costlier than anticipated. But high-income states have no right that enabling climate adaptation change be cost free. Fair opportunities for adaptation to climate change are something that high-income states owe to the most vulnerable, not something that they can make conditional on their deriving benefits from it.

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CONFLICT OF INTEREST

The author declares no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The author affirms this research did not involve human subjects.

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