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Article 1

The Environment and Climate Change: Is International Migration Part of the Problem or Part of the Solution

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FORDHAM ENVIRONMENTAL LAW REVIEW

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**GLOBAL RESPONSES TO ECO-MIGRATION AND
ENVIRONMENTAL DISASTERS: THE ROLE OF U.S. AND
INTERNATIONAL LAW AND POLICY**

**THE ENVIRONMENT AND CLIMATE CHANGE: IS
INTERNATIONAL MIGRATION PART OF THE PROBLEM
OR PART OF THE SOLUTION?**

*Howard F. Chang**

Environmental degradation caused by climate change or other factors will cause migration of those displaced or harmed. Droughts, desertification, flooding, and other natural disasters have caused such migration in the past and are likely to increase in the future as a result of climate change.¹ Indeed, climate change may become the largest environmental cause of displacement in the future.²

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1. See Oli Brown, Int'l Org. for Migration, Migration and Climate Change 16 (2008) (predicting that "climate change will cause population movements by making certain parts of the world much less viable places to live; by causing food and water supplies to become more unreliable and increasing the frequency and severity of floods and storms"). As Brown observes: "[m]igration is (and always has been) an important mechanism to deal with climate stress." *Id.* at 21.

2. See Suzette Brooks Masters, Environmentally Induced Migration: Beyond a Culture of Reaction, 14 Geo. Immigr. L.J. 855, 863-64 (2000) (warning that "climate change represents a likely future cause of tremendous environmental

In this essay, I address how immigration policies should respond to international migration induced by environmental degradation, especially degradation resulting from climate change. In Part I, I consider the suggestion that we create a new category of refugee entitled to special rights under national immigration laws. I suggest that such a category is unlikely to help most of those harmed by environmental degradation unless it is so broad as to liberalize economic migration substantially. In Part II, I consider the economics of international migration, which indicates that liberalization of that migration is likely both to increase global wealth and to improve its distribution. In Part III, I offer a critique of the claims advanced by advocates of immigration restriction as a policy to protect the environment. I argue that we should instead turn to more equitable and more efficient responses to climate change and other environmental problems. In Part IV, I conclude that liberalized immigration laws would instead be part of the optimal response to environmental problems.

I. ENVIRONMENTAL MIGRANTS

Although some have suggested treating environmental migrants as refugees,³ the legal definition of a refugee under the immigration laws of the United States and under international law includes only those fleeing persecution in their home countries, not those fleeing environmental or economic harm at home.⁴ This definition makes

damage and displacement, capable of dwarfing all the other factors”); *id.* at 865 (noting that “some experts forecast that climate change may become the largest source of displacement in the future”).

3. *See, e.g.*, Norman Myers & Jennifer Kent, *Environmental Exodus: An Emergent Crisis in the Global Arena* 154 (1995) (urging us “to expand our entire approach to refugees in general in order to encompass environmental refugees” and to grant “official standing” to “environmental refugees”); *see also* Brown, *supra* note 1, at 13-14, 36-37 (discussing efforts to expand the definition of “refugee” to include environmental migrants); Masters, *supra* note 2, at 866-70 (same).

4. Under U.S. law, a “refugee” must be “unable or unwilling to return” to the refugee’s home country “because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion.” 8 U.S.C. § 1101(a)(42)(A) (2000). Similarly, international law requires a “refugee” to have a “well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular

some sense once we recognize that the primary function of these rules is to grant a particularly needy class of international migrants special rights under national immigration laws.⁵ These special rights derive their justification from the dire consequences of returning international migrants to a country in which they face persecution. Most people directly displaced by environmental degradation can avoid the most dire consequences of that degradation within the borders of their home country.⁶ In contrast, at least when the refugee's own government is either the perpetrator or sponsor of persecution, this persecution raises a presumption against an internal flight alternative.⁷ If we seek a definition suitable for immigration law purposes, then we would attempt to define a class of environmental migrants who similarly lack an internal flight

social group or political opinion." Convention Relating to the Status of Refugees art. 1, July 28, 1951, 189 U.N.T.S. 137.

5. I am using the term "immigration laws" broadly to include not only laws regarding admission of immigrants for permanent residence but also laws regarding more limited rights for aliens seeking entry. These rights may include, for example, *nonrefoulement*, which protects a refugee against return to a country of persecution. See Thomas Alexander Aleinikoff et al., *Immigration and Citizenship: Process and Policy* 845 (6th ed. 2008).

6. There may be some whose only reasonable option will be international migration. In the face of climate change, for example, "migration may be the only possible adaptive response in the case of some of the Small Island and low-lying states where rising seas will eventually flood large parts of the country." Brown, *supra* note 1, at 38. "The scope for internal population redistribution within such countries is limited, so there will be pressure for resettlement in another country." Graeme Hugo, *Environmental Concerns and International Migration*, 30 *Int'l Migration Rev.* 105, 119 (1996). These cases, however, will be the exception rather than the rule: "[m]ost people displaced by environmental causes will find new homes within the boundaries of their own countries." Brown, *supra* note 1, at 23; see Hugo, *supra*, at 119 (predicting that "it is within countries that the bulk of population displacement is likely to occur"); see also Masters, *supra* note 2, at 868 ("[T]he vast majority of environmental migrants are internally displaced persons who are excluded from the definition of refugee primarily because they have not crossed international borders, rather than because the environmental factors inducing their migration do not amount to persecution or concerted state action.").

7. See 8 C.F.R. §§ 208.13(b)(3)(ii), 1208.13(b)(3)(ii) (2004); Stephen H. Legomsky, *Immigration and Refugee Law and Policy* 1052 (4th ed. 2005) (noting that "if there is an internal flight alternative," then the alien's "fear of persecution" is "not well-founded," but "if the government is either the perpetrator or the sponsor of the persecution . . . there is a rebuttable presumption" against such an alternative).

alternative. The result, however, would probably be a rather narrow definition that will be of little use for most migrants harmed by environmental degradation.

At the same time, we may believe that principles of justice imply that a broader class of international migrants has a special claim to immigration based on the environmental cause of the harm that they are seeking to escape. If the wealthy countries of the world, for example, are responsible for most emissions of greenhouse gases, then we might believe that those countries have a special obligation to mitigate the harm that climate change inflicts on the poor in developing countries, who have emitted the least per capita.⁸ This moral obligation might include a duty to admit migrants fleeing the adverse effects of anthropogenic climate change on their quality of life,⁹ even if these adverse effects may not rise to the same level of harm faced by those fleeing persecution. This rationale makes it important to identify the effects of anthropogenic climate change in particular, because the precise cause of migration is important to the international migrant's moral claim.

If we define this broader class of environmental migrants to include anyone harmed by anthropogenic climate change, however, then we may find it difficult to identify members of this class. First, scientific uncertainty may undermine our ability to attribute any particular environmental harm to anthropogenic climate change. For example, if a farmer worker can no longer make a living because the land he farms has deteriorated as a result of drought and desertification, then how do we determine whether this desertification would have occurred even in the absence of greenhouse gas emissions or is instead the result of anthropogenic climate change? Tracing the cause of any particular harm may be difficult when anthropogenic climate change only increases the risk of such specific events.

8. See Brown, *supra* note 1, at 39 ("Some analysts are beginning to argue that immigration is both a necessary element of global redistributive justice and an important response to climate change; that greenhouse gas emitters should take an allocation of climate migrants in proportion to their historical emissions.").

9. See Masters, *supra* note 2, at 879 (arguing that "richer nations" should "welcome migrants from less developed countries," because "all nations are partners in a global social contract with global responsibilities," including a duty "to share in the global environmental burdens that affects nations unequally").

Second, even if we assume that the observed desertification has been caused by anthropogenic climate change rather than other factors, the question remains whether the farm worker would have migrated even in the absence of that desertification. After all, the process of economic development normally leads workers to migrate from rural farms to urban labor markets as employment opportunities expand in local cities. Thus, even in the absence of desertification, any given migrating farm worker may have left home to seek better economic opportunities elsewhere.¹⁰

Finally, the problem becomes even more difficult once we recognize that those who migrate across national borders may flee the indirect effects of climate change. For example, farm workers displaced from agriculture may migrate to seek work in local cities within their home country, driving down wages in those urban labor markets. The drop in wages may induce other workers with better access to social networks abroad to emigrate in search of higher wages in wealthy countries of immigration.¹¹ These international migrants, like the farm workers, seek to escape economic harm caused by climate change.

Similar economic harm arises when a poor country must divert scarce public resources to adapt to climate change, for example, to build sea walls to adapt to higher sea levels.¹² If this adaptation leaves less in the public treasury to invest in other infrastructure or in public education, then the result may be a less developed economy and greater incentives for migrants to leave their home countries in search of better opportunities elsewhere. These international

10. See Brown, *supra* note 1, at 25 (noting that “disaggregating what role climate change might play in added rural-urban migration is speculative”); *id.* at 12 (observing that “disaggregating the role of climate change from other environmental, economic and social factors” in “individual migrants’ decisions to leave their homes” behind “requires an ambitious analytical step into the dark”); Steve Lonergan, *The Role of Environmental Degradation in Population Displacement*, *Envntl. Change & Sec. Project Rep.*, Spring 1998, at 5, 12 (noting that “population movement” occurs “in response to a combination of environmental, economic, social and political . . . stimuli”).

11. See Brown, *supra* note 1, at 23 (“Migration . . . typically requires access to money, family networks and contacts in the destination country.”).

12. See *id.* at 38 (predicting that “individual countries will have to make a series of cost-benefit decisions on what they want to protect,” for example, by “building sea walls”).

migrants also seek to escape economic harm caused by climate change.

If most harm from climate change takes economic forms, however, then environmental migrants will be difficult to distinguish from economic migrants who flow along the same paths to seek the same opportunities in the same destination countries. After all, the environmental migrant has no more reason than the economic migrant to favor employment opportunities in countries of immigration over those available in the country of emigration. A country of immigration will not find it easy to tell precisely which migrants would not have migrated but for the widespread effects of anthropogenic climate change.

For all these reasons, the prospects seem dim for a workable yet usefully broad legal definition of environmental migrants for immigration law purposes that successfully distinguishes such migrants from economic migrants. Our alternatives are probably to adopt either a narrow definition that excludes many who are harmed by anthropogenic climate change or a broad definition that in practice allows many economic migrants to benefit as well.¹³ In this sense, an immigration policy designed to help a large number of environmental migrants would also require us to tolerate greater flows of economic migrants.

II. THE ECONOMICS OF MIGRATION

Unfortunately, current immigration policies in the United States and other wealthy countries are hostile to economic migrants from developing countries,¹⁴ which would supply most environmental

13. See Masters, *supra* note 2, at 868 (predicting that “consensus on which categories of migrants are suitable for inclusion within an expanded definition of refugee would be very difficult to achieve, and only a limited expansion would be possible given the enormous number of migrants potentially eligible to become refugees overnight if the definition were ever changed”).

14. See Myers & Kent, *supra* note 3, at 9 (noting that “migrant aliens prove unwelcome” and that “developed countries . . . are taking steps to further restrict immigration flows from developing countries”); see also Masters, *supra* note 2, at 873 (noting that “a major impediment” to “possible policy responses to environmental displacement” arises because “host countries are increasingly reluctant to accept immigrants”).

migrants.¹⁵ Less developed countries will tend to be less able to adapt and more vulnerable to environmental degradation than wealthy countries. Yet restrictive immigration policies prevent the poor from fleeing the harm inflicted by climate change in developing countries.

These restrictive policies remain popular despite the economic gains that the world enjoys when workers migrate from low-wage countries to high-wage countries.¹⁶ Higher wages in the destination country imply that the marginal product of labor is higher there than in the source country. That is, higher wages for the same worker mean that the worker produces more value in the destination country than in the source country. Labor migration generally leads to net gains in global wealth because labor flows to the country where it has the highest-value use.¹⁷ For this reason, basic economic theory raises a presumption in favor of the free movement of labor. Immigration restrictions distort the global labor market, producing a misallocation of labor among countries, thereby wasting human resources and creating unnecessary poverty in labor-abundant countries.

In fact, the World Bank has recently studied the potential gains from a modest increase in migration from “developing” countries to “high-income countries” and concluded that such an increase “would generate large increases in global welfare.”¹⁸ The gains would be distributed such that if we examine the effects on natives in countries of immigration, on the migrants, and on those left behind in countries of emigration, we find that each group would enjoy significant gains. The migrants would gain by obtaining higher wages in destination countries, natives in destination countries would obtain goods and

15. See Brown, *supra* note 1, at 31 (noting that “the developing countries – the least responsible for emissions of greenhouse gases – will be the most affected by climate change”).

16. The discussion that follows draws from a more extended discussion in Howard F. Chang, *The Economic Impact of International Labor Migration: Recent Estimates and Policy Implications*, 16 *Temp. Pol. & Civ. Rts. L. Rev.* 321, 322-26 (2007).

17. See Paul R. Krugman & Maurice Obstfeld, *International Economics: Theory and Policy* 158-59 (2d ed. 1991).

18. World Bank, *Global Economic Prospects 2006: Economic Implications of Remittances and Migration* 25-26 (2006). The World Bank concludes that an increase in migration sufficient to increase the labor force in the host countries by 3% by the year 2025 would increase the world’s real income by \$356 billion in 2025. See *id.* at 31.

services from immigrant labor at lower cost, and those left behind in source countries would enjoy a net gain from remittances sent home by migrants working in destination countries.¹⁹

III. ENVIRONMENTAL RESTRICTIONISM

Regrettably, restrictive immigration policies enjoy political support from some in the environmental movement in the United States.²⁰ In 2004, for example, the leadership of the Sierra Club had a heated debate over whether to advocate immigration restrictions, with Richard Lamm, the former Democratic governor of Colorado, arguing in favor of a restrictionist agenda.²¹ Although the Sierra Club decided to remain neutral on the issue,²² as have most environmental groups,²³ some environmentalists have defended restrictive immigration policies.²⁴ Garret Hardin, for example, argues for restrictionist immigration policies because migration of poor people into rich countries means “speeding up the destruction of the environment in rich countries.”²⁵ In a similar vein, Roy Beck cites water pollution in lakes and rivers, urban air pollution, and

19. *See id.* at 34.

20. Restrictionist policies derive similar support in Australia, where Graeme Hugo reports that “the argument that immigrants exacerbate environmental pressures is gathering strength in the ongoing national debate about immigration levels.” Hugo, *supra* note 6, at 122.

21. *See* Felicity Barringer, Bitter Division for Sierra Club on Immigration, N.Y. Times, Mar. 16, 2004, at A1. The Sierra Club also debated this issue several years earlier. *See* John H. Cushman, An Uncomfortable Debate Fuels a Sierra Club Election, N.Y. Times, Apr. 5, 1998, § 1, at 14.

22. *See* Felicity Barringer, Establishment Candidates Defeat Challengers in Sierra Club Voting, N.Y. Times, Apr. 22, 2004, at A18.

23. *See* David Hunter et al., International Environmental Law and Policy 100 (3d ed. 2007).

24. *See* Aleinikoff et al., *supra* note 5, at 487 (noting that “[s]ome environmentalists have taken a lead role in efforts to restrict immigration,” in order to reduce “air and water pollution, urban sprawl, climate change, and wasteful consumption”); Legomsky, *supra* note 7, at 75 (noting that some environmentalists “fear that high levels of immigration, by increasing the population size . . . , will exacerbate congestion, sprawl, pollution, and consumption of scarce resources”).

25. Garret Hardin, Living on a Lifeboat, 24 BioScience 561, 566 (1974).

“urban sprawl” as reasons for Congress “to set immigration . . . as close to zero as possible.”²⁶

Immigration restrictions, however, are misguided from an environmental perspective. Although migrants may impose environmental costs in the host country, their emigration may produce greater environmental benefits in the source country, where population growth may increase pollution or deforestation. As the National Research Council has observed, “[f]rom a world perspective, (negative) environmental effects in the United States may be counterbalanced by possible (positive) effects in the sending countries that are losing population.”²⁷ In this sense, those who defend immigration restrictions as a way to avoid urban sprawl or local pollution at home exhibit an especially myopic brand of environmentalism, one focused on the domestic effects of immigration rather than on the total effect of migration on the global environment as a whole.²⁸ This perverse myopia is ironic in a movement known for urging us to “think globally.”

A. International Migration and Population Growth

There are restrictionists who argue against immigration in terms of effects on the global environment or on the environment in countries of emigration. Some restrictionists suggest that migration will undermine incentives for citizens of countries of emigration to protect their local environment or to curb population growth. John

26. Roy Beck, *The Case Against Immigration: The Moral, Economic, Social, and Environmental Reasons for Reducing U.S. Immigration Back to Traditional Levels* 248-49 (1996); *see id.* at 228-36 (citing environmental impacts in the United States as a reason to cut off immigration); *see also* David Miller, *Immigration: The Case for Limits*, in *Contemporary Debates in Applied Ethics* 193, 202 (Andrew I. Cohen & Christopher Heath Wellman eds., 2005) (worrying about immigration’s “impacts on the physical environment,” such as “congestion” and reduced “access to open space”).

27. National Research Council, *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration* 99 (James P. Smith & Barry Edmonston eds. 1997) [hereinafter NRC].

28. For a defense of a cosmopolitan normative framework, which adopts a global perspective on the morality of immigration restrictions, *see* Howard F. Chang, *The Economics of International Labor Migration and the Case for Global Distributive Justice in Liberal Political Theory*, 41 *Cornell Int’l L.J.* 1, 11-25 (2008).

Rawls, for example, worries that people may be tempted to “make up for their irresponsibility in caring for their land and its natural resources . . . by migrating into other people’s territory.”²⁹ Similarly, Joseph Heath speculates that liberalized migration could undermine incentives for countries to adopt “population control measures” and policies “preventing long-term environmental degradation” at home.³⁰ “Would any country any longer try to limit its birth rate,” Herman Daly asks, if its citizens were free to “migrate abroad . . . ?”³¹ In a similar vein, Virginia Abernethy asserts that the “[o]pportunity to immigrate to the United States as well as large-scale international aid are probable factors contributing to high fertility in Third World countries.”³² Insofar as population growth generates greater pressure on natural resources in the global commons, any tendency for migration to undermine population control would also harm the global environment.

We must weigh these conjectures, however, against the empirical evidence indicating that migration would instead reduce population growth. Migrants who move from developing countries with high fertility rates to developed countries with low fertility rates often reduce their own fertility to the lower rates prevailing in the country of immigration.³³ Immigration restrictions force prospective

29. John Rawls, *The Law of Peoples* 39 (1999).

30. Joseph Heath, *Immigration, Multiculturalism, and the Social Contract*, 10 *Can. J.L. & Jurisprudence* 343, 348 (1997).

31. Herman E. Daly, *Population, Migration, and Globalization*, 59 *Ecological Econ.* 187, 188 (2006).

32. Virginia Abernethy, *The Demographic Transition Revisited: Lessons for Foreign Aid and U.S. Immigration Policy*, 8 *Ecological Econ.* 235, 247 (1993). Heath suggests that “if China could count on an ability to export its surplus population to less crowded parts of the world, the incentive to control it would be considerably diminished.” Heath, *supra* note 30, at 348; see Miller, *supra* note 26, at 201 (“A viable population policy . . . requires each state to be responsible for stabilizing . . . its population over time, and this is going to be impossible . . . if there are no restrictions on the movement of people between states.”). *But see* Eric Neumayer, *The Environment: One More Reason to Keep Immigrants Out?*, 59 *Ecological Econ.* 204, 206 (2006) (“[T]o my knowledge there is not much evidence that any country uses the ‘safety valve’ of migration . . . to avoid tackling domestic demographic problems.”).

33. See Joel E. Cohen, *Human Population Grows Up*, *Sci. Am.*, Sept. 2005, at 48, 54 (suggesting that migration “may accelerate the slowing of population growth,” because “[m]igrants who move from high-fertility to low-fertility regions or their descendants often adopt the reduced fertility patterns of their new home,

migrants to remain in developing countries, where they are likely to have more children than they would if they instead migrated to developed countries.³⁴ Based on this effect, the National Research Council predicts that “total world population will be slightly lower,” not higher, with more immigration into the United States.³⁵

Furthermore, immigration restrictions may lead developed countries to adopt fertility policies designed to increase population growth rates in their native populations. As Russia and the wealthier countries of Europe see their fertility rates falling and their populations shrinking and growing older, they find that they have fewer young workers to support the elderly in their retirement years. Precisely because these countries resist liberalized immigration from developing countries as a response to their demographic problem, some of these countries have adopted the use of financial incentives instead to encourage their women to have more children.³⁶ These fertility policies are perverse in a world of excessive population growth and scarce natural resources.³⁷ Liberalized immigration policies would reduce the demand for such environmentally harmful fertility policies, because migrants tend to be young workers, those who have the most years of work still ahead of them and thus the most to gain from access to labor markets in wealthy countries.³⁸

with some time delay”); *see also* Francine D. Blau, *The Fertility of Immigrant Women: Evidence from High-Fertility Source Countries*, in *Immigration and the Work Force* 93, 127 (George J. Borjas & Richard B. Freeman eds., 1992) (reporting “indirect evidence suggesting that immigrant women have fewer children in the United States than they would have had in the source country”).

34. *See* Neumayer, *supra* note 32, at 206 (“[I]f forced to remain in their developing sending country, . . . would-be emigrants are likely to have more children than they will in their chosen country of destination.”).

35. NRC, *supra* note 27, at 99.

36. *See* C.J. Chivers, *Putin Urges Plan to Reverse Slide in the Birth Rate*, N.Y. Times, May 11, 2006, at A6; *see also* Russel Shorto, *No Babies?*, N.Y. Times, June 29, 2008 (Magazine), at 34. Russia, for example, has adopted programs to increase the birth rate by paying subsidies to families that have more children. *See* Clifford J. Levy, *Its Population Falling, Russia Beckons Its Children Home*, N.Y. Times, Mar. 21, 2009, at A1.

37. *See* Hunter et al., *supra* note 23, at 86-101 (discussing the challenges posed by population growth for the global environment).

38. *See* NRC, *supra* note 27, at 353 (estimating the “average fiscal impact of immigrants” in the United States and concluding that it “is positive in part because they tend to arrive at young working ages . . . and in part because they will help to pay the public costs of the aging baby-boom generations”).

Finally, insofar as emigration allows incomes to rise in developing countries, global population growth is likely to fall. Emigration would reduce the abundance of labor in developing countries and thereby increase real wages in those countries of emigration.³⁹ Moreover, remittance payments from migrants will also raise the standard of living in developing countries.⁴⁰ The resulting increase in wealth for developing countries seems likely to reduce birth rates in those countries toward the low levels prevailing in wealthier developed countries.⁴¹

The observation that “higher-income countries are characterized by lower population growth rates” at the present time is consistent with the stages of population growth experienced by industrialized countries over time during their economic development.⁴² Although population growth may rise during earlier stages of this process, the third and final stage, “the period of demographic transition, involves large declines in the birthrate which exceed the continued declines in the death rate,” suggesting that “reductions in population growth might accompany rising standards of living.”⁴³ Indeed, since 1975, “strong evidence indicates that most nations have entered the third phase, with overall growth rates falling.”⁴⁴ Given this empirical evidence, at this point, rising standards of living in developing countries seem more likely on balance to reduce global population growth than to increase it. Therefore, the net effect of liberalized

39. See World Bank, *supra* note 18, at 57-58.

40. See Brown, *supra* note 1, at 34 (noting that “outmigration can . . . enhance the economic situation left behind through remittances,” which “exceed official development aid in some developing countries”); *id.* at 40 (observing that “shutting borders . . . undermines remittance economies and denies developing countries the benefits of access to the international labour market”).

41. See Neumayer, *supra* note 32, at 206 (noting that as “remittance payments are likely to spur economic development” and “more developed countries have lower fertility rates,” emigration would be “likely” to “have a negative rather than positive effect on birth rates” in countries of emigration that receive remittances).

42. Tom Tietenberg, *Environmental Economics and Policy* 103 (4th ed. 2004).

43. *Id.* at 104-05.

44. Jonathan M. Harris, *Environmental and Natural Resource Economics: A Contemporary Approach* 187 (2002); see Eban S. Goodstein, *Economics and the Environment* 425 (5th ed. 2008) (“After cresting in the late 1960s, population growth rates have fallen in many places including China and India, the middle income countries, and the developed countries: Globally the rate of population growth fell to 1.3% from 1995 to 2000.”).

immigration laws, which seem likely to promote higher standards of living in developing countries, would probably be to reduce world population growth.

B. Poverty as an Environmental Policy

By increasing wealth for the world's poor, international migration would also increase the demand for environmental amenities and for more pollution control in developing countries. As incomes rise, the political pressure for more environmental protection in those countries will increase, as the population becomes more able to afford the costs of pollution abatement.⁴⁵ Based on this effect and other consequences of economic development, the "Environmental Kuznets Curve" or "EKC hypothesis" predicts that "as per capita incomes rise in real terms, environmental quality will first of all fall but then, once some 'turning point' has been reached, start to rise."⁴⁶ Indeed, at least for "local and regional pollutants," the available empirical evidence supports the EKC hypothesis.⁴⁷ This evidence suggests that international migration may promote environmental protection in many respects by increasing incomes in developing countries.⁴⁸

45. See Nick Hanley et al., Introduction to Environmental Economics 130 (2001) ("There is an increasing demand for environmental quality as incomes go up. This leads to an increase in government protection of the environment, and increasing green consumerism.").

46. Nick Hanley et al., Environmental Economics in Theory and Practice 426 (2d ed. 2007); see *id.* ("Reasons given for pollution falling after the turning point, and environmental quality rising, include . . . a rising demand for environmental quality resulting in tougher environmental standards.").

47. Hanley et al., *supra* note 45, at 131 (citing studies of deforestation, sulfur dioxide, "urban emissions of particulates, and hazardous waste sites"). The most widely cited study examined "urban air pollution and contamination in river basins" and found that "air and water quality appear to benefit from economic growth once some critical level of income has been reached," which "in almost every case" occurs "at an income of less than \$8000 (1985 dollars)" per capita. Gene M. Grossman & Alan B. Krueger, Economic Growth and the Environment, 110 Q.J. Econ. 353, 370 (1995); see, e.g., Harris, *supra* note 44, at 414 n.1 (citing Grossman & Krueger, *supra*, as a study of "sulfur dioxide, smoke, and particulate matter in air" and "oxygen loss, fecal contamination, and heavy metal contamination in water" that found evidence of the EKC hypothesis).

48. "In fact," considering all the environmental benefits of poverty reduction in "poor countries," Eban Goodstein concludes that "the *only* effective way to

Furthermore, even if international migration had no effect on environmental policies, the resulting shift in world population could still produce environmental benefits. As migrants move from poor countries to rich countries, their migration tends to move people into jurisdictions with more stringent environmental regulations.⁴⁹ Any comprehensive evaluation of the environmental impact of international migration must consider all of these environmental benefits.

Finally, insofar as emigration generates higher incomes in developing countries, this effect would also help alleviate the economic harm inflicted by climate change on those who stay behind as well as on those who emigrate. Thus, liberalized immigration policies allow us to mitigate the consequences of climate change, not only for environmental migrants who cross international borders but also for those who remain in their countries of origin. In this sense, a focus on the international migrants alone understates the degree to which liberalized immigration laws would compensate the victims of climate change.

Yet some in the environmental movement fear international migration precisely because migration will increase wealth for the poor. In particular, when immigrants enjoy an increase in their own incomes, some fear that these immigrants will cause greater environmental harm than if they remained poor in their countries of origin, because these migrants will adopt the consumption patterns prevailing in wealthy countries.⁵⁰ Residents of wealthy countries, including the United States, consume fossil fuels and other natural resources at much higher rates than residents of developing

improve environmental conditions is to alleviate the tremendous poverty faced by many of the people in these nations.” Goodstein, *supra* note 44, at 423.

49. NRC, *supra* note 27, at 99 (noting that “efforts to abate environmental effects at any given level of consumption may . . . be higher in the United States” than in countries sending immigrants to the United States).

50. See Paul R. Ehrlich & Anne H. Ehrlich, *One with Nineveh: Politics, Consumption, and the Human Future* 108 (2004) (worrying that migrants “on average, . . . better their condition, become more affluent, consume more, and thus add more to the overall environmental impact of human beings than if they had stayed home”); Hunter et al., *supra* note 23, at 100 (“Given U.S. consumption patterns, the average immigrant to the United States from a developing country will cause significantly higher environmental impacts than if they stayed in their native lands.”).

countries.⁵¹ The United States and other industrialized countries are major sources of emissions of carbon dioxide and other greenhouse gases.⁵²

These environmentalists essentially advocate immigration restrictions precisely because we expect such restrictions to keep poor people in the very poverty that they want to escape. This deliberate use of poverty as an environmental policy is an especially ugly brand of environmentalism. This embrace of poverty as a policy instrument ignores the availability of far better, more efficient, more equitable, and more humane environmental policies.

IV. THE OPTIMAL RESPONSE TO ENVIRONMENTAL PROBLEMS

To the extent that immigrants increase environmental harm, either in the host country or globally, the optimal response would be environmental policies tailored to specific environmental problems.⁵³ For example, if we fear increased emissions of greenhouse gases, we should impose a tax on such emissions without discriminating against immigrants. Pollution taxes, such as a carbon tax on fossil fuels, can internalize negative externalities and deter immigrant and native alike from the specific activities causing environmental harm. We could use the revenues from such taxes to reduce income or payroll taxes, which would benefit native workers.⁵⁴ Immigration restrictions are relatively wasteful and clumsy instruments for environmental

51. See Aleinikoff et al., *supra* note 5, at 487 (noting that some environmentalists cite the fact that “persons in the United States . . . consume energy and resources at a much higher level than persons in other countries” as a reason to restrict immigration into the United States).

52. Mary M. Kritz, Time for a National Discussion on Immigration, 36 *Int’l Migration Rev.* 33, 34 (2002) (noting that “[d]ue mainly to immigration, U.S. population growth has climbed” and asking “about the implications of these population trends in an industrialized society that is highly dependent on fossil fuels and a major producer of greenhouse gas emissions”).

53. See Hugo, *supra* note 6, at 123 (suggesting that a country of immigration “will be better off in general using resource management policies targeted to deal with specific resource and environmental concerns, rather than using immigration policies”).

54. Representative John Larson has introduced a bill in the U.S. Congress to impose such a carbon tax and to return the revenue to workers through lower payroll taxes. See John M. Broder, House Bill for a Carbon Tax to Cut Emissions Faces a Steep Climb, *N.Y. Times*, Mar. 6, 2009, at A13.

protection, because they needlessly sacrifice the benefits of migration, including the gains from international trade in the labor market. The collateral damage caused by immigration restrictions includes the poverty inflicted on those excluded by our restrictive policies.

Indeed, to some extent, migration would be part of the optimal response to environmental problems such as climate change. Given the costs of preventing climate change and the costs of other forms of adaptation, emigration would be part of the optimal mix of responses to climate change.⁵⁵ We should recognize that international migration is an important form of adaptation, not a symptom of a failure to adapt.⁵⁶ International migration mitigates the harm caused by climate change to its victims. Immigration restrictions make climate change more costly than necessary by blocking this obvious avenue of adaptation.⁵⁷ Thus, one of our responses to environmental migration should be to relax these restrictions not only to reduce global poverty but also to facilitate adaptation to environmental degradation in developing countries.

55. See Jason Scott Johnston, *A Looming Policy Disaster*, Regulation, Fall 2008, at 38, 44 (arguing in favor of immigration policies that allow “people in developing countries at particular risk from global warming . . . [to] immigrate to the safer and more prosperous developed world”).

56. Here I paraphrase Brown, who complains about the prevailing attitude of the international community: “[m]igration is typically seen as a failure of adaptation, not a form of it.” Brown, *supra* note 1, at 38.

57. See Masters, *supra* note 2, at 856 (“In the face of severe environmental stress, migration is a natural, adaptive, and inevitable occurrence.”).