# Final Reports from the Inaugural Carnegie Ethics Fellow Cohort, 2023-2025

Artificial Intelligence and Election Integrity in 2024

Child Poverty and Equality of Opportunity for Children in the United States

Ethical Considerations for the Future of Artificial Intelligence in Education (AIED) and Healthcare

Considerations for a Climate Migrant's Bill of Rights

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In today's world of geopolitical upheaval and global economic transformation, where can young leaders go to understand the power of ethical leadership, its impact on multilateral cooperation and collaboration, and how it applies to their professional and personal lives?

The **Carnegie Ethics Fellowship (CEF)** is a space for talented young professionals to develop their capabilities and be examples of values-driven responsible leadership. From our Global Ethics Hub in New York City, Fellows collaborate on projects curated by Carnegie Council, giving them the opportunity to contribute to work that has deep connections to both their local communities and the broader world. At the conclusion of the Fellowship, the cohort organizes a Symposium showcasing their final projects.

The two-year Fellowship is structured to develop the next generation of ethical leaders from business, government, academia, and non-governmental organizations. The Fellowship is part of Carnegie Council's significant commitment to developing ethics in leadership and to the communities of experts that work toward this end, aligning the power of decision-making with reflective right action. The following final projects from the inaugural CEF cohort reflect nearly two years of convenings, collaboration, and research. Each report in this special series examines a critical issue at the intersection of ethics and international affairs.

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# Artificial Intelligence and Election Integrity in 2024

**Assessing ethical questions, concerns, and trade-offs as 2 billion voters cast their ballots**

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## A Historic Electoral Milestone

Marked by an unprecedented number of elections, 2024 represents a historic milestone in democratic governance for scholars and citizens alike. Approximately 64 countries—representing over 2 billion people—will have elections this year. Among those polities, India, the United States, Indonesia, Brazil, and Mexico stand out as the largest and most economically prosperous democracies with significant electoral processes—not to mention the European Parliament. And political mobilization of this scale should not be taken for granted: This level of collective electoral participation will not be seen again until 2048.

Although those who support democracy as the best political framework for facilitating economic prosperity and safeguarding basic human rights should be heartened by widespread suffrage, political and economic volatility remain major countervailing concerns. Perhaps the biggest threat to democratic governance is the least understood: Societies still do not know how to sufficiently combat the use of artificial intelligence (AI) by malevolent actors who are deploying this technology to fuel manipulation, misinformation, and disinformation campaigns. From deepfake images to AI bots masquerading as real people on social media platforms, there are plenty of tools for malicious actors to use if they wish to undermine democratic regimes—and worse, most of these activities have become extremely difficult to circumvent. For example, during the 2020 U.S. presidential election, AI-generated profiles were used to spread misinformation and create confusion among voters. Notable cases involved AI-generated fake news about political candidates, amplified by bots across media platforms, making it harder for voters to discern legitimate information from

fabricated content These activities have become quite sophisticated and remarkably challenging to detect and mitigate, undermining democratic integrity in the process.

A comparison with past electoral cycles reveals the extent to which technological concerns have taken precedence over other issues. Historically, election monitors were primarily focused on ensuring voters' physical security, combating classic forms of election fraud (e.g., stuffing ballot boxes with illegal votes on behalf of a favored candidate or party), and confirming the results of manual vote counts. Now, election monitors must pay closer attention to social media posts spreading lies about voting locations or doctored images of candidates accompanied with untrue statements about their political views.

With generative AI platforms such as ChatGPT growing more adept by the day, widespread adoption of this technology alongside substantial efforts to get out the vote in 2024 is set to meaningfully reshape the election landscape and potentially influence democratic processes in unforeseen ways. As their impact intensifies, it will be important to understand the challenges that adoption of this technology presents while also understanding how societies can become more resilient in facing such challenges. This article provides a summary of the trade-offs associated with managing AI's potential impact on elections, examining broad global and national implications for safeguarding electoral integrity.

# Balancing Competing Values and Key Trade-offs

In spite of the legitimate concerns AI presents—many of which have been mentioned at the outset of this article—these technologies also offer promising opportunities for safeguarding electoral security and democratic integrity. AI can be employed to detect and mitigate cyber attacks, such as hacking attempts on voting systems and databases. Machine-learning algorithms can analyze vast amounts of data to identify patterns indicative of fraud or interference, enabling faster responses to possible threats. Automated systems are also capable of processing votes with much higher accuracy than manual programs, minimizing latent human error risks. Furthermore, AI-driven tools can improve verification processes for voter identification and registration, thereby reducing fraud risks and ensuring compliance with legal and ethical standards. Proactive implementation of AI in these areas (among many others) can foster greater public trust in electoral outcomes by helping make democratic processes more transparent and reliable.

Of course, we cannot ignore the risk that self-interested actors will try to leverage AI for their own gain from an electoral perspective. For example, leaders of fragile democracies may seek to exploit AI technologies to entrench incumbent power by monitoring and suppressing opposition activities, manipulating public opinion, and skewing electoral outcomes in favor of the ruling regime. By undermining democratic processes in this way, indefinite, prolonged incumbency may result in the erosion of basic human rights over time. Therefore, we believe there is an urgent need for cooperation between national governments, multinational technology companies, NGOs, academic institutions, and media outfits to counter AI-related threats to democracy in a collaborative fashion. Beyond basic knowledge-sharing, these cross-cutting partnerships can help bridge technological divides wherever they exist and ensure greater equanimity in access to the tools and infrastructure needed to protect sensitive electoral processes.

To help encourage the development of multilateral, multi-stakeholder partnerships that can manage the threats AI presents to democracy while harnessing its positive potential, we have identified six key trade-offs for interested parties to consider: privacy versus transparency, security versus accessibility, innovation versus stability, safeguards versus chilling effects, efficiency versus accountability, and centralization versus decentralization. These trade-offs may serve as useful lenses through which to understand how AI may be leveraged to mount a positive (i.e., proactive) defense of democracy as malevolent actors aim to goad decision-makers into negative (i.e., reactive) responses, recognizing the inescapable value judgments prompted by this multifaceted analysis.

# Privacy versus Transparency

When applying AI technologies to the electoral process, there is a critical trade-off between privacy and transparency. While AI can improve transparency by making electoral processes more open and data-driven, it can also infringe on individual privacy. For example, AI-driven voter verification systems can ensure that only eligible voters participate, therefore enhancing transparency at a time when political parties are challenging the resiliency of their own systems with greater aplomb (e.g., U.S. President Donald Trump's assertion that votes were rigged against him during the 2020 election). However, these systems will likely collect and store other sensitive personal data, raising privacy and data security concerns. Striking the right balance requires careful regulation to protect privacy without compromising transparency, and such a nuanced approach will be difficult to achieve at the start of any effort to leverage novel technologies.

# Security versus Accessibility

AI can enhance election security by identifying and mitigating cyber threats, but it may also limit accessibility to the political process on a local or national level. Advanced AI systems often require significant technological infrastructure

and expertise, which may not be available to all prospective voters. Enhancing security through AI might inadvertently prove exclusionary, creating disparities in how different communities perceive electoral integrity. Returning to the United States as an illustrative example in this regard, imagine a world where prominent "blue" or Democratic-leaning states have robust election security measures in place, but key "red" or Republican-leaning states do not. If one of those red states has an issue with vote counts, it may be used by political parties to drive discourse around the results toward divisive ends, whether it is by claiming an illegitimate outcome or highlighting gaps between the "haves and have-nots" on a national scale. As a result, ensuring accessibility while maintaining security is a complex balancing act that necessitates creating inclusive technological solutions for all potential actors.

# Innovation versus Stability

Rapid innovation around AI technologies presents a notable trade-off with electoral stability. While innovative AI applications can modernize and improve electoral processes, their introduction may also introduce unforeseen risks if co-opted by malign forces. New AI tools, such as chatbots meant to answer questions about how to cast one's ballot in a particular region, might malfunction or be exploited by malicious actors. If a chatbot intended to be a source of truth is manipulated to spread falsehoods at scale, there is no telling how far downstream the impacts may go. And if the impacts are significant enough, it may even necessitate a re-vote or extension of the promised electoral timeframe, sowing doubt in the process. Balancing the benefits of innovation with the need to ensure stable and predictable electoral processes is essential for maintaining public trust in democratic systems.

# Safeguards versus Chilling Effects

Connected to the idea of innovation versus stability, maintaining safeguards against AI abuse will prove fundamental if democratic societies are to be protected from relevant threats. Yet, we must

preserve some degree of nuance with respect to the safeguards implemented. Returning to the significant achievement ChatGPT represents, that technological leap was made possible by a business landscape and policy apparatus that strongly supported innovation. One could imagine a regulatory landscape that was so restrictive in its scope that it actually inhibited innovation and dissuaded entrepreneurs from taking the risks necessary to realize their visions. Therefore, even though AI must be kept within appropriate guardrails that can be constructed and policed, it must also be given the ability to develop in ways that can be beneficial for society—and its creators—long term. AI leadership will surely come to shape geopolitics, economic growth, and societal development over time, and regulators must thread the needle between protecting citizens and enabling technological creatives to test the limits of what is possible in the digital realm with all the latent capacity to improve society (including democratic governance) for the better.

# Efficiency versus Accountability

AI systems have the potential to improve the efficiency of electoral processes, such as voter registration or vote-counting. However, these efficiencies can sometimes come at the cost of accountability. AI systems, particularly those based on complex algorithms, can operate as "black boxes" that make it difficult to understand their decision-making processes (for example, consider recommendation algorithms that determine what individual people see on Google or social media apps whose main feeds are based on complex inputs). If errors occur, determining responsibility and ensuring accountability becomes challenging. Finding a balance between leveraging AI for its promised efficiency gains while ensuring accountability when things go awry is crucial for reassuring citizens that election results can be trusted.

# Key Trade-offs to Consider

### Privacy versus Transparency

While AI can improve transparency by making electoral processes more open and data-driven, it can also infringe on individual privacy.

### Security versus Accessibility

AI can enhance election security by identifying and mitigating cyber threats, but it may also limit accessibility to the political process on a local or national level.

### Innovation versus Stability

While AI innovations can modernize elections, they also introduce risks that could destabilize the process if misused, making it crucial to balance progress with electoral stability.

### Safeguards versus Chilling Effects

While safeguards against AI abuse are essential for protecting democracy, overly restrictive regulations could stifle innovation and hinder beneficial developments.

### Efficiency versus Accountability

While AI can enhance the efficiency of electoral processes, it risks accountability by operating as a "black box", making it difficult to determine responsibility when errors occur.

### Centralization versus Decentralization

While centralization enhances coordination, it risks power concentration and abuse, whereas decentralization increases security but introduces monitoring challenges and inconsistencies.

## Centralization versus Decentralization

Finally, AI deployment in elections may be best managed by using centralized systems for data processing and decision-making. A centralized approach naturally can be understood to enhance coordination and effectiveness. At the same time, centralization would likely result in concentrated power, and such power increases the risk of potential abuse whether by actors with direct access to the underlying infrastructure or malign parties who can more easily target the resulting system. In comparison, decentralized systems may reduce the risk of concentrated power, making manipulation more difficult to achieve. This heightened resiliency against attack must be balanced against greater challenges in monitoring and potential inconsistencies across the system.

Imagine an interconnected series of servers designed to manage a national election campaign, while local governments are given the freedom to determine which servers to select according to the resources available to them. The only stipulation is that these servers must be interoperable. Without a clear mandate for establishing baseline levels of quality and sophistication, one could envision an outcome where some regions have high-quality and largely secure servers while others end up with less robust infrastructure. If these lesser servers fail to live up to expectations while a live election is in process, such weak links may undermine the entire electoral framework. In summary, the sliding scale between centralized and decentralized technological systems for managing elections must involve establishing frameworks that are consistent in their quality, universally fair and not easily susceptible to mismanagement or power grabbing.

# Deepfake Mitigation: Lessons from the 2024 Mexican Presidential Election

In the run up to a landmark general election that saw Claudia Sheinbaum become the first female president in Mexican history, concerns regarding the impact of artificial intelligence swirled around the race. Although it remains unclear how significant the impact of this nascent technology was, it certainly shaped discourse around the election as candidates were forced to debunk deepfakes and doctored posts that spread lies about their respective platforms. Malevolent actors leveraged AI-generated content to make false claims about Sheinbaum's campaign, with one famously claiming that her campaign was failing by using audio that was altered to sound like it was coming from the candidate herself. And it was not just campaign-oriented misinformation: Given the weight that any information purported as coming from Sheinbaum would carry in Mexican society during the campaign, fraudsters also saw value in leveraging her voice for financial gain. A well-circulated deepfake video of Sheinbaum was used to spread investment-related scams.

The most high-profile instances of deepfake use targeted the new president's campaign, but misinformation efforts affecting her opponent Xóchitl Gálvez added another level of complexity to the Mexican general election. President Sheinbaum's victory represents continuity for the ruling Morena party, previously led by the former president Andrés Manuel López Obrador, a charismatic left-wing leader who is no stranger to leveraging misinformation opportunities for his benefit. Given his popularity and the power of the "bully pulpit" that his presidency carried, AMLO (as he is commonly known) faced few restrictions in being able to parrot falsehoods about Gálvez's campaign—falsehoods that would eventually make their way to supportive "troll" accounts on X/Twitter and other social media platforms. Even though Gálvez did her best to debunk the lies, once they became social media fodder (thanks to the support of the president), they took on a new life, demonstrating the challenges of fighting misinformation once it is allowed to grow online.

Gálvez's experience also serves as a reminder that the greatest threats to electoral integrity can come from institutional actors: It is difficult enough to protect voters from third-party generated misinformation, but when the falsehoods come from leaders that should feel an obligation to protect their own citizens from such lies, safeguarding this process is almost impossible. Given President Sheinbaum's own experience with misinformation, one can only hope that she will be much more diligent than her predecessor in ensuring that the statements she issues are bereft of falsities that malevolent actors (or even her own party) can use to beguile citizens.

Beyond the particular attacks Mexican presidential candidates faced using AI platforms, the Mexican general election also demonstrated the risks of AI as applied to the very institutions that have been entrusted with ensuring electoral integrity. Mexico's election authority, the Instituto Nacional Electoral (INE), has a broad mandate for organizing and overseeing elections at the federal level. During the recent election cycle, misinformation campaigns targeting the INE gained significant traction, with one claiming that it was possible to erase the markers the INE handed out to help voters cast their votes, therefore making it possible to vote multiple times (which would constitute fraud). If malevolent actors are able to undermine an independent organization tasked with ensuring the legitimacy of Mexican elections, then it is difficult to see how ordinary Mexicans will be encouraged to trust the outcome of democratic elections over

time. Combine this with attempts to throw the INE into question levied by AMLO himself, and these actions pose perhaps the greatest threat to Mexican electoral integrity in the long term. From the new president to the INE, key stakeholders must come together to strengthen Mexico's resiliency against future attacks on electoral integrity.

Amidst the outcome of the Mexican elections, there are some green shoots that should give observers hope for strong cross-cutting partnerships from an electoral perspective. One positive example is a recent multi-stakeholder approach bringing together policy advocates, journalists, and government officials. Representing a joint effort by Obturador Photo Agency, a collection of Mexican photojournalists; the Canadian Broadcasting Corporation (CBC); and the German Marshall Fund's (GMF) Technology Program, technological systems were introduced that would help verify the authenticity of electoral images using file metadata. By training editors to use these tools, it will better enable them to confirm whether images have been doctored or falsified, which will make it easier to separate fake photos from real images before they become widely circulated in articles. In other cases, it will enable photojournalists to confirm whether photos already in circulation are fake and decry their use accordingly. Although this technology is not guaranteed to capture every false image that enters (or could enter) the digital realm, it would certainly empower sophisticated actors on the frontlines of democratic speech to help safeguard democratic ideals one image at a time.

# Conclusion

Integrating AI into democratic electoral processes presents a complex array of trade-offs with corresponding risks and benefits—all made more acute during this year of unprecedented political mobilization. While AI holds the promise of enhancing election security and integrity, it also introduces new challenges that must be carefully managed. Policymakers and election authorities must navigate such trade-offs with caution, ensuring that the deployment of AI does not undermine the

very democratic principles it aims to protect. By fostering transparency, accountability, and equitable access to AI technologies, societies can harness the vast potential of these novel tools to strengthen democracy while mitigating their risks. As this year unfolds, the ethical and strategic deployment of AI to support free, fair elections may come to represent a crucial inflection point in democratic governance worldwide.

# Child Poverty and Equality of Opportunity for Children in the United States

**Examining ethical obligations to the next generation**

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## Introduction

The well-being of children is fundamental to the future health and prosperity of any society. Governments have an inherent responsibility to ensure that children receive the care and opportunities necessary to develop and thrive. This ethical obligation is rooted in social contract notions, which posit that individuals consent to surrender some freedoms and submit to the authority of the government in exchange for protection of their remaining rights. Philosophers such as John Locke and Jean-Jacques Rousseau, whose works greatly influenced the founding of America's political institutions, emphasized the government's role in safeguarding the welfare of its citizens, especially its most vulnerable members.

In the modern era, American philosopher John Rawls, whose take on social contract theory was heavily influenced by his childhood during the Great Depression, argued that, in a just society, institutional structures should proactively be arranged to benefit the least advantaged citizens Today, the protection and support of children remains a critical ethical issue within U.S public life.

However, despite boasting the world's highest GDP per capita ($81,695 in 2023), the U.S. has seen a troubling rise in income inequality, leading to widening opportunity gaps for children across various domains such as health, education, job prospects, and financial stability. According to the U.S. Department of Agriculture (USDA), in 2023, 8.9 percent (3.2 million) of households with children faced food insecurity.

Good-faith efforts to eradicate child poverty are key to ensuring a fair society that better supports equality of opportunity. By implementing policies

that provide financial support and resources to children in low-income households, governments could better level the playing field and enhance opportunities for future generations. Such a commitment to child welfare would not only foster a more equitable society but also acknowledge that a child's potential should not be determined by their socioeconomic background.

The following brief explores the alleviation of child poverty in the United States as a moral imperative, analyzes the impact of growing income inequality, and discusses potential solutions to close the equality of opportunity gap and address child poverty, including pandemic-era relief programs.

# Historical Context and Current State of Income Inequality

Income inequality has long been a feature of the American economic landscape, but its recent escalation poses significant challenges to social cohesion and mobility. After World War II, the United States experienced a period of relative economic equality and robust middle-class growth. However, starting in the 1970s, various economic and political changes, including globalization, technological advancements, and shifts in labor policies, began to widen the income gap. The decline of manufacturing jobs, the weakening of labor unions, and tax policies favoring the wealthy have contributed to this growing disparity. As a result, wealth became increasingly concentrated in the hands of a few, while wages for middle- and lower-income workers stagnated. This trend has continued into the 21st century, with profound implications for children's opportunities and well-being.

Today, income inequality in the United States is at its highest level in decades. According to data from the U.S. Census Bureau, the Gini coefficient, a measure of income inequality, has steadily increased—8.8 percent from 1993 to 2021—indicating a growing wealth gap. This economic divide has far-reaching consequences, particularly for children from low-income households. According to Robert Putnam, political scientist and public policy professor at Harvard University, there is a stark difference in opportunities available to children from affluent families compared to those from poorer backgrounds. These disparities manifest in various domains, including health, education, job prospects, and financial stability. Putnam's influential 2015 book *Our Kids: The American Dream in Crisis* provides a comprehensive analysis of how this growing inequality affects children's lives.

With this in mind, it's clear that American institutions are not living up to the social contract ideals of Rawls and even earlier thinkers like Locke and Rousseau.

# Snapshot: How Poverty Impacts Children

## Health Disparities

Children from low-income households often face significant health challenges. Limited access to quality healthcare, inadequate nutrition, and unsafe living conditions contribute to poorer health outcomes. According to a study by the American Academy of Pediatrics, children living in poverty are more likely to suffer from chronic conditions such as asthma, obesity, and mental health issues. These health disparities hinder their ability to perform well in school and participate in activities that promote healthy development.

# Educational Inequality

Education is a critical pathway to upward mobility, yet children from low-income households frequently attend underfunded schools with fewer resources and less experienced teachers. According to a study by the Economic Policy Institute, schools in high-poverty areas often have larger class sizes, outdated materials, and inadequate facilities. These conditions impede students' academic progress and limit their future opportunities. Putnam's research underscores the importance of early childhood education and extracurricular activities in fostering children's development. However, access to these opportunities is often restricted by economic constraints. Affluent families can afford private preschools, tutoring, and enrichment programs, while children in low-income households may miss out on these critical developmental experiences.

# Job Prospects and Financial Stability

The long-term effects of growing up in poverty extend into adulthood, influencing job prospects and financial stability. Children from low-income households are less likely to complete higher education, which significantly impacts their earning potential. The Social Security Administration reports that individuals with college degrees earn significantly more over their lifetimes than those without them. Without access to quality education and career opportunities, the cycle of poverty perpetuates, limiting social mobility and entrenching inequality.

## Barriers to Success: Poverty's Effects on Kids

### Health Disparities

Children in low-income households often face chronic health challenges due to limited healthcare access, poor nutrition, and unsafe living conditions.

### Educational Inequality

Underfunded schools with fewer resources restrict academic opportunities for children in poverty, impacting their long-term potential.

### Job Prospects and Financial Stability

Growing up in poverty limits education and job opportunities, perpetuating a cycle of low earnings and restricted social mobility in adulthood.

# Policies to Address Child Poverty

## Pandemic Programs: School Meals, Child Tax Credit, and Stimulus Checks

The COVID-19 pandemic exacerbated existing inequalities but also provided an opportunity to test the effectiveness of direct financial support in alleviating child poverty. According to the Center on Budget and Policy Priorities, the poverty rate in the U.S. fell to a record low of 8 percent in 2021, in part due to federal pandemic relief initiatives, bolstering equality in society. Three notable initiatives implemented during

the pandemic—increased access to school meals, the expanded Child Tax Credit (CTC), and stimulus checks—demonstrated significant positive impacts on reducing child poverty.

### Free School Meals

COVID-19 legislation that expanded access to free school lunches played a vital role in reducing food insecurity among families and children. According to a study conducted by the Urban Institute, food insecurity rates among households with children decreased significantly from spring 2020 to 2021, with nearly 30 percent fewer reporting difficulties in obtaining enough food. The emergency measures, including Temporary Emergency Supplemental Nutrition Assistance Program (SNAP) benefits and waivers for school meal programs, provided critical support. These initiatives allowed schools to offer meals even when in-person classes were not feasible, ensuring that children continued to receive essential nutrition during a time of heightened economic uncertainty.

Research from the Food Research & Action Center (FRAC) highlights that areas with enhanced access to school meal programs saw a substantial decrease in food insecurity. FRAC reported that schools providing free meals to all students led to an increase in meal participation rates, especially among low-income households. In many districts, the percentage of children accessing free school meals rose by over 20 percent, illustrating how such legislative efforts not only alleviated immediate hunger but also fostered long-term health and academic benefits. This data underscores the critical importance of continued support for school meal programs, particularly in times of crisis, to ensure that no child goes hungry.

### Expanded Child Tax Credit

The American Rescue Plan Act of 2021 expanded the CTC, providing monthly payments to families with children. This expansion increased the credit amount and made it fully refundable, meaning families could receive the full benefit even if they had little or no income. According to a study by the Center on Poverty and Social Policy at Columbia University, the expanded CTC lifted 3 million children out of poverty

in just one month and reduced the child poverty rate by close to 30 percent.

The financial support provided by the CTC allowed families to cover essential expenses such as food, housing, and childcare. This immediate relief improved children's well-being, reducing stress and insecurity. Moreover, the CTC's monthly distribution helped families manage their budgets more effectively, providing a stable source of income.

The CTC's expiration in 2022 had a significant and immediate impact on child poverty rates. According to the Center on Budget and Policy Priorities, approximately 3.7 million children were at risk of falling back into poverty after the enhanced payments ended, reversing much of the progress made during the pandemic. The loss of this financial support exacerbated economic strain, with families reporting increased difficulties in affording necessities. This decline not only affected children's immediate well-being but also threatened their long-term development, highlighting the critical role of the CTC in alleviating child poverty and providing economic stability for vulnerable households.

### Stimulus Checks

The U.S. federal government issued several rounds of stimulus checks to individuals and families during the pandemic. These direct payments provided crucial financial relief to millions of Americans, helping to mitigate the economic impact of the pandemic. Research by the University of Michigan found that stimulus checks significantly reduced financial instability, with recipients using the funds to pay for necessities and reduce debt.

For families with children, stimulus checks alleviated financial pressures and improved living conditions. The additional income enabled parents to provide better nutrition, healthcare, and educational resources for their children, contributing to their overall well-being.

According to the U.S. Census Bureau, the direct payments helped lift approximately 11.7 million people—including 3.2 million children—out of poverty in 2020 alone. This influx of cash not only

helped improve immediate living conditions but also contributed to better health and educational outcomes for children, highlighting the vital role of direct financial assistance in supporting low-income households during crises.

# Shifting to a Well-Being Model

While direct financial support is crucial, addressing child poverty requires a broader perspective that encompasses the overall well-being of children. This "well-being" model includes access to quality healthcare, education, and social services, recognizing that financial stability alone is insufficient to ensure a child's success. A broader model that not only addresses current needs but also tackles the root causes of poverty helps ensure that all children have equitable access to resources, fostering a society that truly reflects American values of justice and equality.

### Healthcare Access

Expanding access to affordable healthcare is essential for addressing health disparities among children. Programs such as Medicaid and the Children's Health Insurance Program (CHIP) provide critical support to low-income households, ensuring that children receive necessary medical care. Research from the American Academy of Pediatrics shows that the expansion of CHIP significantly reduced the uninsured rate among children, contributing to improved health outcomes and increased access to preventive care; states with expanded CHIP programs saw an over 20 percent reduction in child poverty rates compared to states without such expansions. However, there is still a need for comprehensive healthcare reform to cover all children, regardless of their parents' income or employment status.

Investing in preventive care and mental health services is particularly important. Preventive care can identify and address health issues early, reducing the long-term costs and impacts of chronic conditions. Mental health services are crucial for supporting children's emotional and psychological well-being, helping them cope with the stresses of poverty and other adversities.

### Educational Investment

Ensuring equal access to quality education is vital for breaking the cycle of poverty. This requires significant investment in public schools, particularly those in high-poverty areas. Funding should be directed towards improving school infrastructure, reducing class sizes, and providing resources such as updated textbooks and technology.

Early childhood education is another critical area for investment. Programs like Head Start have proven effective in promoting school readiness and long-term academic success for children from low-income households. Expanding access to these programs can provide a strong foundation for children's development, setting them on a path to future success.

Extracurricular activities and after-school programs also play a crucial role in children's development. These programs provide safe spaces, mentorship, and opportunities for social and academic enrichment.

### Community Support Systems

Building strong community support systems is essential for enhancing the overall well-being of children. Community centers, after-school programs, and mentorship opportunities provide children with safe environments, positive role models, and additional educational and recreational resources. These support systems can help mitigate the effects of poverty and foster a sense of belonging and hope among children. For example, the Success By 6 program, which operates in various communities across the United States, offers a range of services, including access to quality early childhood education, parenting resources, and health and wellness programs. By equipping parents with the knowledge and tools they need, the program aims to enhance children's developmental outcomes and prepare them for success in school and life.

### Money vs. Support Services

The debate over whether it is better to provide direct financial support or invest in support services

for children is complex. Both approaches have merits and can be complementary rather than mutually exclusive.

Direct financial support, such as the Child Tax Credit and stimulus checks, provides immediate relief and helps families meet their basic needs. This support can reduce stress and instability, creating a more conducive environment for children's development. However, financial aid alone does not address the structural issues that contribute to poverty.

Investing in support services, such as healthcare, education, and community programs, addresses the root causes of poverty and provides long-term benefits. Quality healthcare ensures that children can grow up healthy and ready to learn. Education equips them with the skills and knowledge needed for future success. Community programs offer additional support and enrichment, helping children thrive in all aspects of their lives.

A comprehensive approach that combines direct financial support with investments in support services is likely to be the most effective in addressing child poverty and promoting equality of opportunity.

# Conclusion

The need for government action to eradicate child poverty is fundamentally grounded in ethical principles that underscore the responsibility of government to protect and uplift the most vulnerable members of society. Social contract theory asserts that a government's legitimacy hinges on its commitment to promote the welfare of all citizens, particularly those in need. This notion resonates with the Enlightenment ideals tightly interwoven into the tapestry of America's political philosophy—from its founding through Rawls and T. M. Scanlon—emphasizing equality and the inherent rights of individuals, and, thereby, asserting that every child deserves the opportunity to thrive.

Addressing child poverty and promoting equality of opportunity for children in the United States requires a multifaceted approach that combines direct financial support with investments in healthcare, education, and community support systems. The successes of pandemic-era programs like free school meals, the expanded Child Tax Credit, and stimulus checks demonstrate the immediate benefits of direct financial assistance. However, a broader well-being model that addresses the root causes of poverty is essential for long-term success.

Given the unique federalist nature of the U.S. political system, policies and pilots to benefit thousands of children need not necessarily depend on federal initiatives; they may stem from state and municipal legislatures. Regardless, rigorously evaluated programs in multiple contexts would slowly work to support the expansion policies to address child poverty, helping to create a more just and equitable society.

*"The need for government action to eradicate child poverty is fundamentally grounded in ethical principles that underscore the responsibility of government to protect and uplift the most vulnerable members of society."*

# Ethical Considerations for the Future of Artificial Intelligence in Education (AIED) and Healthcare

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## Introduction

Artificial intelligence (AI) has the potential to revolutionize healthcare and education, but the ethical implications of these technological systems must be addressed. While AI can improve patient outcomes and personalize learning experiences, mitigating risks such as bias, privacy breaches, and unequal access is essential.

*"Equitable AI systems require diverse data to prevent systemic discrimination and bias, ensuring privacy, trust, and fairness in education."*

# Artificial Intelligence in Education (AIED)

Artificial intelligence in education (AIED) integrates educational theory and technological innovations to improve education systems for teachers and students, ensuring educational accessibility for all. The integration of AI in education presents several ethical challenges that should be addressed:

## AIED Ethical Challenges

### Data Autonomy
Data autonomy issues arise when third-party data ownership is involved, especially in countries where laws do not clearly protect personal data. For instance, using facial recognition technology to gauge classroom engagement can disrupt the natural learning environment and treat students like research subjects whose data might be harvested and sold.

### Bias and Lack of Diversity
AI algorithms focus primarily on data from Western countries that might exclude underrepresented populations. This lack of diversity can increase the digital divide.

### Privacy Concerns
Using data without the consent of students or their guardians raises questions about privacy. Applying AI in a predictive way to assess student performance may hinder the necessary human interaction that teacher immediacy provides.

### Surveillance Issues
Surveillance issues emerge as some learning management systems monitor students' activities, raising privacy questions and hindering social skill development.

# Ethical Framework

1. **Data Mining and Governance**
   Equitable AI systems require the inclusion of diverse data to avoid systemic discrimination and bias. Federal regulations like Family Educational Rights and Privacy Act (FERPA) and the Protection of Pupil Rights Amendment (PPRA) protect student data, but clear parameters for data ownership and stringent supervision are necessary to safeguard privacy and maintain trust.

2. **AI Literacy for Students**
   Students must be educated on AI literacy to use generative AI appropriately and critically. Teachers should integrate AI literacy into the curriculum, focusing on ethical considerations and cultural perspectives.
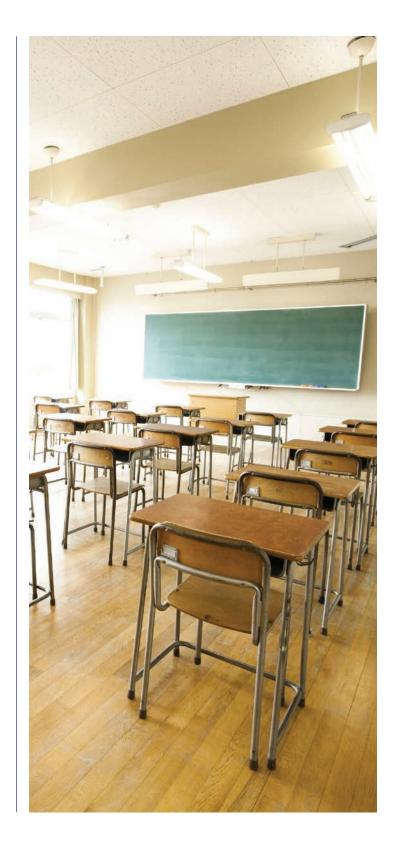
3. **AI Roles for Instructor**
   Academic institutions must develop strategies to detect and deter AI-facilitated plagiarism and set clear guidelines for AI use in academic work to maintain academic integrity. Comprehensive policies should guide how instructors utilize AI in various educational activities, including lesson facilitation, curriculum development, grading, and providing feedback .

4. **AI Accessibility and Equity**
   Ensuring all students can engage with AI technologies meaningfully is crucial. Ethical frameworks should prioritize the needs of students with physical disabilities, neurodiversity, and diverse learning needs.

# Artificial Intelligence in Healthcare

Healthcare artificial intelligence (AI) has enormous potential to enhance patient health outcomes through improved treatment and diagnosis, reductions in human error, and streamlined institutional operations.

However, significant ethical issues surround AI usage around access, bias, data security, decision-making, and employment:

## Artificial Intelligence in Healthcare Ethical Challenges

### Access
Patients from or living in underserved communities may not have access to AI technologies that are poised to markedly improve patient outcomes.

### Bias
Algorithmic bias in healthcare AI—e.g., models solely programmed with specific demographic data—may exacerbate health disparities for underrepresented groups and increase the likelihood of misdiagnoses and inadequate care.

### Data sensitivity
AI models handle significant quantities of personalized data, requiring fully informed patient consent and airtight systems to safeguard data.

### Decision-making
With widespread AI adoption, non-human judgment may override or unduly influence healthcare provider decision-making. In the event of AI-driven decision-making errors, healthcare systems (e.g., hospitals and providers) must have clearly established accountabilities. Ethical frameworks and laws must exist to outline who is legally and morally responsible when AI-led decisions go awry.

### Employment
Rampant AI adoption can fundamentally disrupt employment in the healthcare system, leading to large-scale workforce reduction.

## Ethical Framework

Before innovators develop AI-led health innovations, and before hospital systems adopt them, the following questions should be answered in the affirmative:

1. **Purpose**
   Does this innovation address a specific issue or inefficiency that if solved will meaningfully improve the human condition? Are there non-AI alternatives to solve it?

   - Innovations should address specific issues or inefficiencies that will improve the human condition.

2. **Access**
   Will all patients who can benefit from this innovation have timely access, including those with resource limitations? What is the time horizon for widespread adoption and access?

   - Patients from all backgrounds should have access to AI-driven benefits in a timely fashion (e.g., <six months after adoption).

3. **Bias**
   How was the innovation developed and tested to eliminate potential bias, and what steps are being taken to eliminate biases if/when they arise?

   - Models should be programmed to consider wide-ranging patient demographics to individualize care.

4. **Data Sensitivity**
   Is patient data completely safeguarded? Can the innovation—and how data will be used— be easily explained to patients to get their fully informed consent?

   - Patient data must be safeguarded, and patients must understand how their data will be used and fully consent to it.

5. **Decision-making**
   Will providers have final decision-making authority? If not, why? How will errors be addressed and who will be legally accountable for those errors?

   - Providers should have final decision-making authority and be able to override AI errors.

6. **Employment**
   Will adopting this technology result in a significant reduction in force (RIF)? Do the health outcomes outweigh the social, individual, and economic costs?

   - Social health benefit(s) must outweigh potential social and economic costs (e.g., significant job loss).

7. **Removal**
   Can human decision-makers safely and immediately eliminate the technology if it is found to be harmful?

   - Human decision-makers must be able to safely and immediately eliminate AI-driven innovations found to be harmful.

# Conclusion

Addressing ethical challenges and tradeoffs ensures that AI is implemented in a fair and transparent manner. By developing robust ethical frameworks, we can create an AI ecosystem that respects individual rights and creates supportive learning environments and accessible healthcare services for all.

# Considerations for a Climate Migrant's Bill of Rights

**A political and moral imperative in a world under strain**

PEKUN BAKARE
SOPHIE FLINT
SAMANTHA HUBNER
GEORGE SHADRACK KAMANDA
EMILY KILCREASE

## Introduction

In October 2021, the White House released a new report exploring the impact of climate change on migration. This marked the first time that the U.S. government officially noted the link between climate and human mobility. Small Island Developing States (SIDS) have been highlighting this link for years, but the recognition by the Biden administration of the interconnectedness between climate and migration was a critical step forward. Today, superpowers and small nations alike are seeing the significant impacts of worsening climate change on migration and the global consequences.

Climate change-induced mobility is driven by a myriad of variables, such as extreme weather events or gradual environmental change, leading to significant risks across the spectrum of regional and state stability. In response, individuals and families in climate-vulnerable areas are faced with limited mobility options and even less support from states and the international community. As climate-induced migration rises both within and between states, new ethical questions and concerns are emerging for individuals, families, states, NGOs, and multilateral institutions.

The worsening of climate change-induced migration, alongside its recognition as a critical geopolitical concern, presents an opportunity for the public and policymakers to reflect on the key ethical questions at the heart of the issue and to develop responsible solutions through multilateral means. While it is impossible to move beyond traditional concerns of power and economics rooted within an international system defined by state sovereignty, we cannot afford to sideline ethics as a tool in the discussions and debates around climate migration. Doing so risks exacerbating the negative effects for those

individuals and communities living on the frontlines of climate change.

The following report introduces four considerations for practitioners operating in this space to consider. We intend for these considerations to help inform

a blueprint by which such practitioners can ensure that ethics remain the basis upon which the international community seeks to formalize the protection of the agency, dignity, rights, and well-being of affected individuals and communities.

# Supporting Sustainable Solutions

The intersection between climate change and human mobility is complex, woven by the threads of cultural ties, systemic barriers, physical ability, and human agency. As the effects of climate change continue to grow in severity and frequency, communities tied to the lowest socioeconomic strata are expected to struggle the most, most notably in the Global South, revealing the deep-rooted connections between climate change, poverty, and mobility. By 2050, the World Bank estimates that a combined total of 216 million people could become internally displaced by the impacts of climate change in six regions: sub-Saharan Africa, East Asia and the Pacific, South Asia, North Africa, Latin America, and Eastern Europe and Central Asia. These are also already some of the poorest regions in the world today. Indeed, Black et al. confirmed the connection between climate change, poverty, and mobility, noting how the effects of climate change can affect migration directly—by increasing the hazardousness of a location—and indirectly—by affecting other drivers of migration, such as personal economic circumstances and regional politics.

It is the opinion of these Fellows that individuals and communities migrating due to environmental changes should be provided access to and educated about sustainable solutions and practices to meet their daily basic needs and to reduce the risk of prolonged poverty. Sustainable solutions and practices should be developed in consultation with relevant stakeholders—at-risk rural and urban communities currently mobile and permanently

settled; local, regional, and national governments; intragovernmental agencies; non-governmental agencies; and domain experts—to identify solutions and practices compatible with community and regional cultural practices, native flora and fauna, and local government regulations. The short-term goal of implementing these solutions and practices should be to reduce the risk of immediate poverty due to environmental migration by adequately meeting an individual's or family's daily basic needs, including food security, water security, and energy infrastructure. The long-term goal of implementing these solutions and practices is for individuals, families, and communities to achieve permanent aid independence, producing thriving local economies and increasing financial inclusion into regional and global markets.

## Multidimensional Poverty and Climate Change

In 2017, the World Bank adjusted the international poverty line from $1.90 per person per day to $2.15 per person per day, updating the standard by which impoverished households are categorized as living in extreme poverty. The international poverty line is used to measure only one dimension of poverty: monetary poverty. Monetary poverty, however, is not the only kind of poverty that matters in an ever-changing climate. Multidimensional poverty—defined by the World Bank as households experiencing deprivation of at least one dimension of poverty (monetary, education, access to basic infrastructure)—provides a more

holistic view of what it means to be impoverished in underdeveloped nations and how varying dimensions of poverty do and could interact with the effects of climate change. In 2018, the global multidimensional poverty headcount ratio reached 14.7 percent, outpacing the global monetary poverty headcount ratio of 8.7 percent, bringing attention to the impoverished households not captured by the monetary poverty dimension alone. For the purpose of this consideration, multidimensional poverty refers to households in extreme poverty also experiencing energy poverty and water insecurity, subsections of the Multidimensional Poverty Measure's "access to basic infrastructure" dimension. Access to basic infrastructure—electricity and safe water for consumption and sanitation—is pivotal to the economic prosperity and survival of every person, and will increase in necessity to offset the effects of climate change in vulnerable populations.

Previous case studies highlight the interconnection between multidimensional poverty and the consequences of climate change. Individuals, families, and communities—especially in at-risk regions—should be prioritized in the global push for sustainable development.

- People in poor, rural communities in the drought-affected Northern Highlands of Ethiopia have been cutting down trees to use for firewood for decades, taking more wood to be used for energy consumption than can be replanted. This leads to biodiversity loss, soil erosion, and broader destruction of the greater ecosystem.

- In Zimbabwe, government officials are preparing to cull 200 elephants to alleviate food insecurity due to one of the country's worst droughts in decades. This crisis has left nearly half the country's population at risk of experiencing acute hunger. This follows a similar action taken by the government of Namibia, which culled over 700 wild animals to provide meat for its citizens, nearly half of whom are at high risk of suffering from extreme acute hunger. Namibia is also suffering from

its worst drought in nearly 100 years, with the government citing water conflict between humans and wildlife as a contributing factor to its decision to cull these animals.

# Ethical Implications

In the context of the climate crisis, advanced economies are overwhelmingly responsible for the degradation of the environment and the resulting adverse effects felt throughout the globe in the form of worsening droughts, severe floods, devastating storms, and rising sea levels. In the case of the biomass fuel-dependent communities in Northern Ethiopia, a lack of agency and dignity results from spending too much time gathering and producing biomass fuel for energy consumption to provide for daily basic needs. This time could be more appropriately spent if these communities received access to efficient energy infrastructure, allowing individuals to focus on more sustainable and economical living practices, giving them the freedom to move from subsistence farming to commercial or cooperative farming. They lack the agency to make different decisions because they are trying to survive in a broken system that they themselves did not break; dignity is lost because outside circumstances have made them dependent on aid.

The basis of this consideration, then, is to address the absence of a multidimensional poverty perspective in current climate migration frameworks. Doing this means paying special attention to energy poverty and water security and offering community-based sustainable solutions and practices. This will allow individuals and communities affected by climate change to maintain their agency and preserve their sense of dignity by knowing that they have the ability to sustain themselves and become aid-independent.

# Closing Legal Gaps

Climate migration poses a significant challenge to international humanitarian law, necessitating comprehensive legal reforms and collaborative efforts across various levels of governance. By recognizing the rights of climate change-affected migrants and implementing robust legal protections, the international community can better address the humanitarian implications of this crisis. A multifaceted approach is required, involving individual citizens, states, international organizations, and civil society to create a more inclusive and protective legal framework, ensuring migrants' rights and dignity are upheld amidst the growing challenges posed by climate change. This consideration intends to act as a guide to protect these climate change-affected migrants, ensuring that ethics are the basis for any new legal framework.

The issue of climate change-induced migration is an evolving and urgent challenge, yet there is a noticeable gap in international law addressing the rights and protections of affected persons. Unlike traditional refugees, people migrating due to the effects of climate change are not explicitly covered by the 1951 Refugee Convention or other core international agreements, leaving them in a vulnerable legal position. As climate change increasingly forces groups and individuals to move, the lack of a stand-alone legal framework results in a fragmented approach from receiving states, many of which struggle with capacity and resources.

While no dedicated treaty exists, several international instruments, such as the Universal Declaration of Human Rights, the 1951 Refugee Convention, the International Covenant on Civil and Political Rights, and the Geneva Conventions and Additional Protocols provide foundational protections that can be extended to climate change-affected migrants. Yet, these frameworks do not specifically address the definition of a "climate migrant," or the unique nature of climate migration, such as environmental degradation or climate change-induced displacement.

## The Gaps in Legal Frameworks

The 1951 Refugee Convention and its 1967 Protocol define a refugee as someone fleeing persecution based on race, religion, nationality, or political opinion. However, the Convention does not recognize environmental factors as legitimate grounds for seeking refugee status. Similarly, human rights frameworks like the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights protect basic rights such as life and asylum. However, they do not address the specific vulnerabilities of climate change-induced migration. The Geneva Conventions, designed to protect individuals during conflict, also lack provisions for environmental displacement.

The necessity for creating a robust framework for climate migration cannot be overstated. For example, we can build on the Kyoto Protocol and the Paris Agreement to the United Nations Framework Convention on Climate Change. A climate migration framework could benefit from and leverage proven tools to address climate-driven migration. Kyoto's carbon trading offers a model funding mechanism that channels resources into vulnerable regions, helping communities adapt locally and reducing forced migration. Meanwhile, the Paris Agreement Nationally Determined Contributions (NDCs) and Global Stocktake would provide a basis for migration resilience commitments, meaning national pledges to protect at-risk populations, reviewed regularly to adapt to shifting climate risks. Together, these approaches could suggest a pathway forward and make the case for a climate migration treaty that is well-funded, accountable, and proactive in supporting communities threatened by climate impacts,

instilling confidence in the responsible management of resources.

## Ethical Implications

The ethical imperative of establishing a comprehensive framework for climate migration is paramount. This is not merely a legal necessity but a moral obligation rooted in our commitment to uphold human dignity and respect in the face of unprecedented global challenges. To address climate migration with ethical clarity, we must reimagine protections that respect the agency of individuals and acknowledge the dignity they carry as they are forced to move. Closing the legal gaps that currently exist is crucial to ensuring these protections. Inaction could leave vulnerable communities uncertain, underserved, and unprotected by existing legal frameworks. The urgency of this issue extends beyond what is legally feasible; it underscores what is ethically imperative. We must affirm our collective responsibility to create a humane and just response to climate-induced migration ensuring and safeguarding migrants' human and legal rights.

CONSIDERATION 3:

# Driving Multi-Stakeholder Consensus for Climate Security

As early as 2007, stakeholders across the international security community began to refer to climate migration as a "threat multiplier," whereby the interrelated effects of climate change will "exacerbate pre-existing threats and other drivers of instability to contribute to security risks." This built on existing scholarship showing that the impact of population size, movement, and distribution are widely acknowledged as significant factors in contributing toward state stability, and geopolitical dynamics writ large. Still, many climate security initiatives struggle to adequately account for the impact of ongoing population changes caused by climate change, failing to account for the agency and protection of the rights of the affected individuals. Therefore, these initiatives also do not address the significance of climate migration, instead focusing on climate change-related impacts that more directly affect taxpayers, such as installing costly military base infrastructure to accommodate rising sea levels. As a result, the international community appears overwhelmed and underperforming in contending with how to approach the role of migration in climate security.

## The View from International Institutions

In May of 2022, the North Atlantic Treaty Organization (NATO) published a compelling article that proposed a role for itself in addressing this crisis. Actions include avoiding duplicative interventions and expertise, bolstering civil preparedness, and leveraging its long-time leadership on civil preparedness programs to enhance member countries' capacities to absorb increased numbers of climate-induced migrants. This would be achieved by working across Defense, Diplomacy and Development (3D) programming stakeholders. Yet, in NATO's 2023 Climate Change and Security Impact Assessment, the discussion around the impact of migration as a "threat multiplier" was extremely limited with only three citations represented in the entire bibliography. In fact, despite increasing consensus about the link between climate migration and state stability within the international security community, the International Organization for Migration (IOM) for Climate and Security also appeared unconvinced with regard to these interwoven risks, formerly stating on their website that:

> "The relationship between climate change and migration has [also] often been discussed through a security prism, whereby climate change on the one hand, or migration on the other, are seen as a threat to peace leading to increased securitization of these questions and creating further restrictions to mobility. Yet, existing evidence on the topic is inconclusive, and claims linking climate change, migration, security and conflict must be considered with extreme caution."

Though no specific sources were cited to support this statement, IOM nonetheless outlined initiatives to address the allegedly unsubstantiated "security prism" through the UN Community of Practice (CoP) on Climate and Security, the global Task Force on Migration, Environmental Change and Conflict, and the Geneva Dialogue on Environment, Climate, Conflict, and Peace. It is worth noting that this text no longer appears on the IOM website, which was updated this year to address climate security, in the opinion of this research team, in a much more comprehensive and evidence-based manner:

> "The consequences of climate change affect all areas . . . economic, food, health, environmental, personal, community and political . . . and undermine conflict prevention, sustaining peace and sustainable development efforts with a disproportionate impact on communities with existing vulnerabilities, including migrants, women and girls, children, youth, older persons, persons with disabilities and indigenous peoples. . . . In fragile and conflictaffected states, these dynamics exacerbate tensions, particularly when national and local policies fail to address the causes of existing tension . . ."

The NATO 2024 Climate Change and Security Impact Assessment report, released in late August 2024, included much-needed detail throughout the Resilience and Civil Preparedness section, detailing how supporting local civilian authorities to manage civil services, energy, food and water resources, health crises, and manage uncontrolled movement of people is amplifying pressure on NATO presences. Through a number of case studies, it seems that NATO, like IOM, are beginning to more thoughtfully contend with the role of population structures and regional stability as impacted by climate-induced migration.

## Ethical Implications

Because it is important to be mindful of the political consequences of framing climate migration through the lens of security, as NATO points out in their report, the defense stakeholders must not operate alone in protecting the ethically based rights of individuals when pursuing sustainable solutions. The 3D programming stakeholders are all equally integral constants in any equation that seeks to ethically address climate migration. Thus, there remains a powerful impetus behind the seemingly increasing alignment across different missions of multilateral forums, including both NATO and IOM, as unlikely but necessary partners to leverage ethics as a lens by which to understand how political demography is impacting climate-induced risks toward international security.

As security researcher Asif Muztaba Hassan writes in *The Diplomat*, it is readily apparent that "military planning for climate change does not account for consideration of 'threat to habitats and species,' but focuses on social strife and state collapse in regions already suffering from scarce resources and ethnic friction." Therefore, policy levers and tools must be used to create an incentive structure by which policymakers in the international security and development communities can collaboratively and more effectively strategize about how to address climate migration as a significant threat to international security. These policies must ensure comprehensive and cross-cutting analysis and education across the many interrelated factors that drive population change in response to climate change-induced migration. However, these policies should also seek to consolidate and build momentum behind existing initiatives focused on sustainable and ethics-driven solutions.

# Table 1: Policy Levers for Climate Security

| WHAT | WHO | HOW |
| --- | --- | --- |
| Revisiting the Military Mission to Educate Soldiers on Impacts of Climate Migration | State militaries, localized international development and nonprofit partners, and National Military Strategy stakeholders | The international security community must prepare for changes in mission profiles, military tasking, and standard operating procedures, to include closer consideration of the role Humanitarian Assistance and Disaster Response (HADR) missions play in the midst of climate change. Specifically, militaries must enact new curricular training for the military on impacts of climate migration as it relates to mission planning. |
| Establishing More Effective Information-Sharing and Civil-Military Planning | UN Security Council and the broader international committee | Building from the Comprehensive Global Planning Platform, an implementation tenet within the Model International Mobility Convention, the UN Security Council should lead planning efforts for a dedicated working group that will execute authoritative census efforts toward supporting existing tracking mechanisms of climate migration patterns across the globe. |
| Focus on the Bellwethers of Habitability: Energy & Water Access | Stakeholders in domestic and multilateral bodies that drive strategy documents such as the National Climate Resilience Framework, Climate Adaptation Plan, and others. Such documents require more direct engagement with individuals impacted (or at risk of being impacted) by climate-induced migration, as well as subject matter experts on multidimensional resource scarcity. | Focus on individual prosperity as part of an "enterprise" strategy for addressing climate-induced migration and impacts on geopolitical stability. One such example is the June 2024 partnership between the U.S. Department of Defense and Department of Energy as part of its forthcoming 2024-2027 Climate Adaptation Plan, which specifies "enhancing adaptation and resilience through collaboration with allies and partners" as a key line of effort retained from 2021's plan. |
| Population Growth as a Metric for Nationally Determined Contributions (NDCs) | Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) | About one-third (49) of countries' NDCs either link population growth to a negative effect and/or identify population growth as a challenge or trend affecting societal needs. This must become a required aspect of NDC planning. |

## CONSIDERATION 4:
# Sharing Financial Burdens

As the frequency of climate change-related severe weather events such as droughts, floods, hurricanes, and heat waves increase over time, it is estimated that the potential impact of these events will cost between $1.7 trillion and $3.1 trillion per year by 2050. The National Oceanic and Atmospheric Administration estimates that the cost of climate and weather disasters in the United States totaled more than $165 billion in 2022 (not including cost on healthcare system)—the third most costly year on record for climate emergencies due to 18 separate billion-dollar weather and climate disasters. From 2017 to 2022, the annual costs from billion-dollar disasters have exceeded $100 billion, with 2019 being the only exception. The total cost from 2016 to 2022 exceeded $1 trillion.

## The Cost to Developing Economies

This picture is even bleaker in developing economies that suffer from harsher weather conditions and have fewer mitigation resources; developing countries have 15 times more victims of natural disasters than developed countries. According

to a report by the United Nations Environment Programme, developing nations will require an annual financial commitment ranging from $215 billion to $387 billion throughout this decade to effectively address and mitigate the impacts of climate change.

Inevitably, the dislocation caused by these extreme weather events is a global challenge that requires funding at multiple levels for various uses. Funding is required for several purposes including resettlement, climate adaptation, climate mitigation, and rebuilding. Following the board meetings held by the United Nations Framework on Climate Change (UNFCC), the Loss and Damage Fund has now been operationalized with funding of ~$661 million since it began at COP28 in Dubai 2023.

## Ethical Implications

As to how funds such as these should be distributed, the principle of equitable burden-sharing should be the foundation for financial decision-making. By spreading the burden of adapting to and mitigating climate change effects across states, this reduces the risk of states dealing with additional financial burdens when the livelihood of their communities is at risk.

This consideration has an important role to play in keeping the vast costs of climate migration manageable as international actors evaluate and respond to the relative preparedness of the world to meet this challenge. If ethical principles are followed in these decisions, we can avoid scenarios such as the case of Niger. In this nation, farmers who rely on agriculture for their livelihood are likely to be severely impacted by reduced productivity due to climate change, yet per capita, Niger only emits 90 kilograms of carbon dioxide emissions annually compared to 13,000 kilograms from the United States.

Basing decisions on a commitment to equitable burden-sharing means that though they may not experience the effects of climate change as catastrophically as small island states or developing nations do, wealthier nations, corporations, and individuals across the world should still contribute more resources to alleviate the pressures on those disproportionately affected.

# Conclusion

Individually, climate change and human mobility are complex issues, but when tied together, this intersection presents a unique set of risks and ethical implications to be considered. Advanced economies in the Global North must contend with the possible security threats caused by worsening, unpredictable climate events, and equally consider the financial costs and benefits of addressing their disproportionate role in contributing to climate change. These nations must, at the same time, heed the pleas of the individual and communitie affected by climate change with the utmost care and respect. Moving forward, should the international community look towards the creation of a Climate Migrant's Bill of Rights as a viable solution, it is important that such a framework not lose sight of what is truly important: the agency, dignity, and well-being of all affected individuals and communities. We are all people; we must treat each other as such.

# Carnegie Ethics Fellows, 2023-2025



### ARMAN AMINI
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Arman Amini is a management consultant at Boston Consulting Group and was previously a math teacher and vice principal in Southeast Arkansas. Amini is a Council on Foreign Relations term member and was a Fulbright scholar in Central Asia. He is an alumnus of Harvard University (where he was a Center for Public Leadership fellow) and earned his MBA at Dartmouth College.



### KRISTINA ARAKELYAN
**Adjunct Assistant Professor of Public Service, New York University**

Kristina Arakelyan is an adjunct assistant professor of public service at New York University. She is a long-time New Yorker who has worked in the public and nonprofit sectors on immigration, social service, domestic violence, human trafficking, and labor policies and programs. Arakelyan teaches coursework in public policy and the humanities at local universities. She holds graduate degrees in Eastern European studies, criminology, and public health.



### PEKUN BAKARE
**Associate, Investment Banking Division, Goldman Sachs**

Pekun Bakare is an associate in the Investment Banking Division of Goldman Sachs covering clients in natural resources. Prior to this, he worked for the Infrastructure Fund of the Nigeria Sovereign Investment Authority and on the Project Finance team of FBN Merchant Bank raising debt capital for energy companies. He received a BA from Durham University (UK), a Master of international affairs from Columbia SIPA, and an MBA from Columbia Business School.

### SOPHIE FLINT
**Project Manager, Strategic Resource Group**

Sophie Flint works as a project manager for Strategic Resource Group, a nonprofit that supports Christian organizations throughout the greater Middle East. She is also a Master's student in the Department of Anthropology and Sociology at the Geneva Graduate Institute (IHEID). Previously, she worked with the International Center for Religion and Diplomacy in Washington, DC. Flint obtained a BA from Pepperdine University.

### BOJAN FRANCUZ
**Deputy Director, Our Future Agenda, United Nations Foundation**

Bojan Francuz is deputy director, Our Future Agenda at the United Nations Foundation. Previously he worked as a program officer at NYU's Center on International Cooperation. Francuz is an expert on a range of peace, urbanism, and innovation issues; a graduate of NYU's Robert F. Wagner School of Public Service; a Humanity in Action Senior Fellow; and a Jeanne Sauvé Public Leadership Fellow.

### TRAVIS GIDADO
**Associate, Kirkland & Ellis LLP**

Travis Gidado is an associate with Kirkland & Ellis LLP. His practice focuses on diverse corporate matters, including mergers and acquisitions, corporate governance, and minority investments. Gidado graduated from Yale University with a BA in ethics, politics, and economics, and his first job was with Goldman, Sachs & Co. as a legal analyst. He also holds an MPhil in public policy from King's College, Cambridge, and a Master of Law in China studies from the Yenching Academy of Peking University, where he was a Yenching Scholar. Gidado received a JDMBA from the University of Chicago Law School and the Booth School of Business, respectively.

### SAMANTHA HUBNER
**Senior AI Policy Advisor, White House Office of Management & Budget**

Samantha Hubner's career began as a linguist and cultural exchange specialist in the nonprofit sector before she transitioned to global security operations and analysis at a data analytics exchange tech startup. She received an MA from the Fletcher School of Law and Diplomacy at Tufts University and a BS from Belmont University. At the Office of Management and Budget, Hubner focuses on developing, implementing, and overseeing policies to support federal agencies in responsibly using, acquiring, and securing AI.

### CHRISTINE JAKOBSON
**Principal, Principia**

Christine Jakobson is an ethics researcher and advisor, helping to make the world a better place through philosophy. She received a Ph.D. focusing on moral philosophy from the University of Cambridge and an MSt from the University of Oxford. Jakobson is a principal at Principia where she works across technology, finance, energy, law, audit, and insurance, advising executive leaders on the ethics of technology, ethical decision-making and leadership, ethical culture, and strategy. Jakobson was selected for the 2022 research sprint at the Berkman Klein Center for Internet Studies at Harvard University and was also awarded a coaching fellowship from the Women's Impact Alliance.

### GEORGE SHADRACK KAMANDA
**Legal Affairs Expert, Permanent Mission of Sierra Leone to the United Nations**

George Shadrack Kamanda is a diplomatic and legal affairs expert at the Permanent Mission of Sierra Leone to the United Nations. He received an MS from the University of Oxford and a JD from Case Western Reserve University School of Law, where he was a Vattel International Law Scholar and a Klatsky Human Rights Fellow. Kamanda has published three books, most recently *Citizenship Reimagined: The Case for Responsible Whole Citizenry in Sierra Leone.*

### MOHAMMED "MOH" KILANI
**Security Fellow, Truman National Security Project**

Mohammed "Moh" Kilani is a policy professional, advocate, and strategist, with a decade of experience in international affairs and technology. He was previously a political appointee at the Pentagon, a Council on Foreign Relations International Affairs Fellow at the Oak Ridge National Laboratory, and former director of evacuation at No One Left Behind. Kilani is a Security Fellow at the Truman National Security Project, and a member of the IEEE Computational Intelligence Society.

### EMILY KILCREASE
**Campaign Manager, America Undivided**

Emily Kilcrease a campaign manager for American Undivided, a youth-lobbying organization dedicated to bringing civility, respect, and compromise back into American politics. Kilcrease graduated from the University of Oregon with a BS in political science and a minor in legal studies. During her undergraduate career, Kilcrease was a two-time recipient of the Oxford Consortium for Human Rights Fellowship, served as a leadership associate for the Emerging Leadership Project, and co-founded the University of Oregon Students for Justice and Human Rights group. Kilcrease is looking forward to applying to appropriate JD and MPP programs this fall.

## EBUKA OKOLI
**Teaching Assistant, School of Communication, Arizona State University**

Ebuka Okoli is a doctoral student and graduate teaching associate at the Hugh Downs School of Human Communication, Arizona State University. He played a key role in the Strategic Planning team that improved revenue collection in Nigeria's Federal Inland Revenue Service (FIRS). Okoli also developed a communication plan for the Strategic Planning and Evaluation Department of the Energy Efficiency Program at ComEd.

## GERALDINE SCIOLTO
**Institution Supervision Supervising Examiner, Federal Reserve Bank of New York**

Geraldine Sciolto is an institution supervision supervising examiner at the Federal Reserve Bank of New York, where she is responsible for helping perform various continuous monitoring and risk-focused supervisory programs for large and complex financial institutions in the Second Federal Reserve District. Previously, Sciolto worked at the Foreign Policy Association. She earned her BBA in finance and investments from Baruch College.

## HINH TRAN
**Lead Counsel, Litigation & Employment, Ramp**

Hinh Tran is lead counsel, litigation & employment at Ramp, a finance automation startup based in New York City. Previously, he was a litigation associate at Keker, Van Nest & Peters and a judicial law clerk for U.S. District Judge Dale A. Drozd. Tran also served as a Bates Legal Fellow for the World Intellectual Property Organization in Geneva, Switzerland, and as a Google Public Policy Fellow. He holds a JD from the University of Michigan Law School, a BA from the University of California, Berkeley, and he also studied at Stanford University's Hoover Institution and the National University of Singapore's Faculty of Law.

## JULIA M. WILTON
**Founder, JW Consulting**

Julia M. Wilton is the founder of JW Consulting, where she works for Fortune 500 companies, law firms, and banks in examining fraud, waste, and abuse; providing litigation support; and conducting complex bespoke investigations. Formerly, Wilton was a senior director in K2 Integrity's Investigations and Risk Advisory practice based in Washington, DC. She previously worked for Forward Risk and Intelligence and as a consultant for the UN Development Programme's Regional Bureau for Arab States in Amman, Jordan. Wilton has an MS in global affairs from NYU and a BA in political science and peace, conflict, and justice studies from the University of Toronto.

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