

REVIEW SUMMARY

URBAN MANAGEMENT

Transformative climate adaptation in the United States: Trends and prospects

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BACKGROUND: Climate disasters are on the rise, with devastating effects on communities, built infrastructure, and ecosystems. Between 2015 and 2020, the United States has seen an average of 14 disasters per year that cost at least \$1 billion, compared with 6.5 such events annually between 1980 and 2019. The COVID-19 pandemic and attendant socioeconomic crisis have laid bare the United States' systemic vulnerabilities and difficulties in launching large-scale, coordinated, just, and effective responses to external shocks, resulting in short-term disruptions and prolonged crises. These same challenges inhibit societal adaptation to climate change, which is already being felt in communities nationwide as the number of disaster events and their geographic reach and intensity increase. The current financial downturn reduces resources for near-term resilience planning, further exposing cities to the next hazard event and driving vicious cycles of fiscal and environmental shocks. More than ever, preparing and adapting to climate impacts require a coherent, cohesive, and collective response across localities, sectors of society, and scales of governance.

ADVANCES: In this Review, we distill three major trends in federal government, industry, and civil society that shape how local communities adapt to extreme weather events and other climate change impacts. First, inconsistent federal leadership on climate adaptation has done little to address drivers of climate injustice and uneven development. The Obama administration initiated various policies to mainstream climate considerations into federal properties and investments that the Trump administration overturned. But even the Obama administration narrowly framed adaptation as disaster resilience, infrastructure investment, and national security issues rather than addressing the drivers of vulnerability, such as social, land, and income inequality. To date, the Biden administration appears to merely reinstate Obama-era approaches to adaptation.

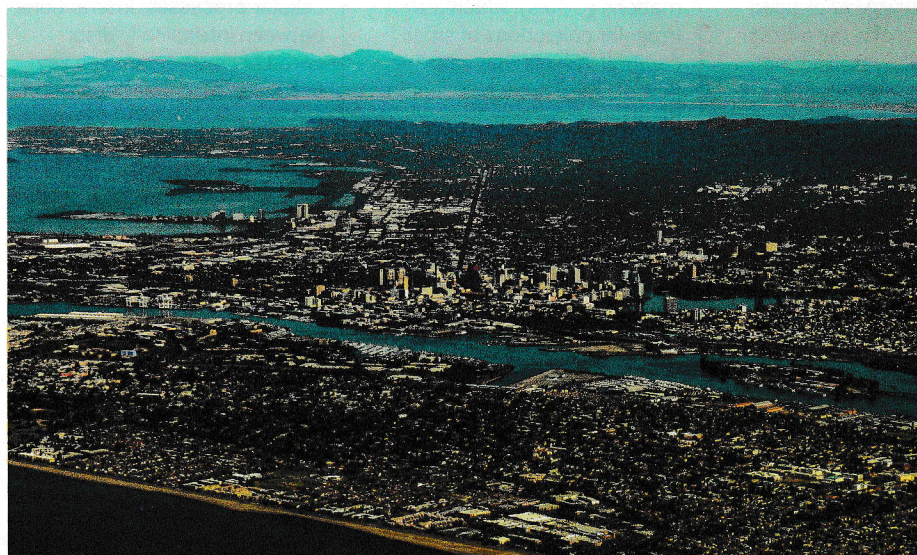
Second, design, engineering, and legal professions are considering systemic amendments to building codes and standards that could force federal and state governments' hands in addressing climate risk. Financial industry decisions over how to rate credit worthiness, where to issue mortgages, and when to raise

or rescind insurance have the power to send mortgage markets and municipal revenues tumbling and increase the costs of infrastructure investment. At present, decisions in these arenas reflect professional and board room concerns for industry risk and liability rather than justice- and community well-being-oriented outcomes.

Third, grassroots and academic advocates increasingly call on leaders to redress exclusionary and environmentally exploitative development and avoid using climate resilience to rehash racialized capitalist development. The groups emphasize the need for an ethics of care, restoring urban and rural communities' relationship to land ownership and stewardship, and deepening democratic engagement.

The growing divergence in how public, private, and civil society actors are responding to climate impacts contributes to maladaptive investment in climate-blind infrastructure, justice-blind reforms to financial and professional sectors, and ultimately, greater societal vulnerability to climate impacts.

OUTLOOK: A shift in presidential leadership alone will not alter the politics, power dynamics, and paradigms that shape US adaptation. Large-scale change such as infrastructure investments and managed retreat can preserve the status quo, unless reforms change the underlying social relationships and power dynamics and center a different set of values and beliefs about humans and human-nature relations. If public, private, and civil society actors are to take up the transformation imperative in a proactive and deliberate way, they need to address the material, relational, and normative factors that hold the current systems in place. Ambitious civil society and private sector leadership invite federal government to respond with bold, integrated, and holistic policies. Community movement strategies for coalition building, including ones across urban-rural divides, demonstrate how to build a political movement for just adaptation. Private-sector reforms of financial instruments pinpoint the places where community organizations and the federal government need to push for just and equitable adaptation. Despite substantial contestation, divergences also point to opportunities to better engage with and learn from one another to advance toward more transformative adaptation. We conclude with examples of possible directions for transformative practice and research in support of these efforts. ■



Larger local jurisdictions, such as Oakland, and smaller neighborhoods around San Francisco Bay, California, struggle to advance urgent and equitable adaptation action. Leadership, coordination, capacity, regulatory alignment, and adequate funding are needed for coherent, cohesive, and collective preparedness and response. COVID-19 magnifies these needs and demonstrates the risks of complex crises.

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