

Pacific Council on International Policy
in partnership with
the Consulate General of the United Arab Emirates in Los Angeles

Climate Sustainability and City Diplomacy

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City Diplomacy can help lead collaboration on tackling the world's most pressing climate crises and global challenges. This policy paper outlines *local-to-global* action ideas for climate sustainability, water and food security, pandemic response and disaster preparedness.

ABOUT THE PACIFIC COUNCIL

The Pacific Council on International Policy brings together leaders from diverse industries and sectors to share ideas. More and more, global thinkers in technology, entertainment, media, business, education, health, science, and the arts serve as brokers of the United States relationship with the world. The Pacific Council aims to help people who live and work in their local communities understand how their movements, choices, and especially their local policies can have a global impact. And likewise, to make international leaders and decision-makers understand how global policies affect small communities every day.

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The first Consulate General of the United Arab Emirates (UAE) in the United States opened in Los Angeles in 2014, providing consular services for UAE citizens and commercial support for US companies seeking to do business in the UAE. California and the greater West Coast are significant contributors to the 50-year UAE-U.S. bilateral relationship. The UAE and U.S. share a future-oriented outlook based on inclusion, gender equality, diversity, educational advancement and the promotion of arts and culture. Cultural, educational, and medical exchanges are spurring innovation and inspiring creativity while connecting the people of both countries.

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A NEW KIND OF POLICY MEMO

Instead of arguing for one policy over another, or comparing policies, this paper instead advocates for a holistic approach to policy work and implementation. It defines key terms such as City Diplomacy, while recognizing that there can be multiple ways of exercising power and diplomacy. The most pressing global challenges require a multifaceted approach and this paper seeks to begin to define that path forward through recommendations for action.

The Pacific Council is a convener for ideas, dialogue, and debate amongst its diverse membership and across the community of the United States' West Coast and aims to be an "action tank" rather than a think tank. This policy paper reflects this unique way of bringing together voices from across sectors, cultures, and leaders at all levels.

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INTRODUCTION: A CALL TO ACTION

The numerous climate and sustainability crises of the last decade exemplify a clear *local-to-global* link that calls for strong relationships between major cities and leaders across diverse sectors of business, technology, academia, politics, culture, and communications. The Pacific Council on International Policy looks to leaders in these industries to contribute solutions to our most pressing global challenges. The tools of diplomacy and strategic communications, plus global partnerships and government cooperation on all levels, will be crucial to forging a new, more sustainable future for cities around the world.

In partnership with the expertise of the Consulate General of the United Arab Emirates in Los Angeles, the following policy areas have been identified as critical arenas for action to mitigate the consequences of climate change: climate sustainability, water and food security, and disaster preparedness. The United Arab Emirates (UAE) and the Greater Los Angeles Area both have arid climates and share similar attributes in facing challenges as the earth's climate changes, presenting an opportunity to collaborate as partners in leading climate sustainability efforts. In a region with extreme heat and scarce natural resources, the UAE has taken aggressive action to meet global challenges like food security and water management. With increasingly more heat extremes and less rainfall, California has managed historic natural disasters and has been named a leading North American region in demonstrating climate leadership through concerted and effective action. Additionally, cities like Dubai and Los Angeles (LA) share characteristics as major ports of global trade, are home to multicultural populations, and are hosts to significant world events like Expo 2020 Dubai and the 2028 Olympic Games.

Why City Diplomacy matters

City Diplomacy is the act of a local entity, often a non-state actor, engaging with global actors via cultural, economic, and political identities in pursuit of collaboration to represent the interests of its citizens. Collaboration between cities on multiple levels of leadership and government has proven to be an effective tool in mitigating the risks of international crises, while also providing a platform for sharing best practices in addressing pressing global challenges. City Diplomacy is a rising trend that has shown increasing impact as a method of international relations, particularly in reducing greenhouse gas emissions, effective disaster response tactics, and constructive international agreements and initiatives. The Pacific Council on International Policy believes that community awareness, civic participation, and cross-sector partnerships improve local leadership on global issues and lead to better policy outcomes.

The goal of this paper is to outline effective ideas for how the UAE and the Greater Los Angeles Area are equipped to cooperate on establishing climate resiliency, serving as examples for global cities facing similar climate challenges.

For example, the UAE's [National Climate Change Plan \(2017–2050\)](#) offers a template for nationwide climate mitigation, with a focus on sustainable cities. It outlines plans to control emissions, cultivate new technology, reduce flaring of natural gas, increase energy efficiency, embrace clean fossil fuels, and focus on sustainable transportation and renewable energy. Similarly, the City of Los Angeles has launched its [Green New Deal Plan for Sustainability](#) with the ambition to become the first major carbon-free US city.¹ This plan outlines targets for green new jobs, waste management, recycled water, renewable energy, and community partnerships. Sharing templates and best practices can help ensure more effective and efficient action as cities of all sizes face future climate challenges.

Changes in climate across the globe necessitate the inclusion of water and food security in any effective climate action plan. At the 26th U.N. Climate Change Conference of the Parties (COP26) held in November 2021, the United Arab Emirates and the United States partnered to launch the Agriculture Innovation Mission for Climate. With backing from 30 countries and 40 Non-Governmental Organizations (NGOs), this initiative will increase investment in climate-smart agriculture. Los Angeles is a leading partner in the C40 Cities network of nearly 100 global cities working to raise ambitions for city actions on climate, of which adaptation for water resilience is a major theme. The City of Dubai is set to host the 28th U.N. Climate Change Conference of the Parties (COP28), where there is a planned emphasis on inclusivity and a sustainable economic future.² Cities around the world can learn to prevent resource scarcity from the cities that are currently suffering from water insecurity and access to sufficient food.

It's important to dedicate city resources towards disaster preparedness as climate change will likely mean facing further natural disasters in the future. Additionally, long-term pandemic recovery and disaster preparedness are new elements to consider in any city's future planning and growth. Los Angeles has learned lessons it can share with the world as California has experienced the most destructive fires in the nation's history over the last few years. Abu Dhabi was ranked as the safest city in the world during the pandemic, providing a template for action that many cities can learn from.³ As natural resources continue to be depleted faster than our planet can replenish them, city cooperation efforts will be an effective tactic for global cities to withstand the challenges that lie ahead and to fortify the supply chains needed to prepare for them.⁴

¹ Werner, E. (2021, October 27). [Los Angeles is aiming to be first major carbon-free U.S. city, but obstacles loom](#). *Washington Post*, Climate Solutions. Retrieved from <https://www.washingtonpost.com/climate-solutions/2021/10/27/los-angeles-2035-climate-goal/>

² Bell, J. (2021, November 12). [UAE rulers welcome successful bid to host COP28, promise accelerated climate action](#). *Al Arabiya News, Gulf, Al Arabiya English*. Retrieved from <https://english.alarabiya.net/News/gulf/2021/11/12/UAE-rulers-welcome-successful-bid-to-host-COP28-promise-accelerated-climate-action->

³ Abu Dhabi Government Media Office. (2021, September 9). [Abu Dhabi Maintains its Lead Global Ranking for Pandemic Response](#). Retrieved from <https://www.mediaoffice.abudhabi/en/health/abu-dhabi-maintains-its-lead-global-ranking-for-pandemic-response/>

⁴ Piven, B. (2019, July 29). [We're depleting natural wealth faster than Earth can replenish it](#). *Al Jazeera*, News, Climate Crisis. Retrieved from <https://www.aljazeera.com/news/2019/7/29/were-depleting-natural-wealth-faster-than-earth-can-replenish-it>

Key questions to consider

Leaders across sectors can consider the following questions to get involved in City Diplomacy efforts:

- What best practices and strategies have we created that can be shared with other city leaders?
- Where are we lacking in resources and knowledge and how can we identify partners who can help us fill gaps in management?
- Who will be affected most by global forces like climate change and natural disasters and how can we galvanize action to protect those most marginalized?
- What relationships need to be forged and what resources can we provide to help bring together regional experts to share knowledge?
- How can we best share our story and participate in global dialogue?
- How should we identify, define, and evaluate effective partnerships with other global cities?
- How can we craft narratives and community engagement tactics that bring together diverse groups of global actors to create change?
- How are our city and region uniquely capable of tackling a global challenge – culturally, economically, and technologically?

CLIMATE SUSTAINABILITY

Cities cannot afford to stay isolated from other cities in efforts towards climate sustainability. Collective and coordinated action is needed across sectors and a strategic plan is more likely to succeed if it involves and galvanizes diverse stakeholders. Global cities are a major cause of greenhouse gas emissions, while urban centers are often more equipped than rural areas to tackle climate change challenges.⁵ The climate sustainability challenges we face are within the capacities of the world to overcome, especially since cities can be effective incubators for innovations of all types.⁶

“City-based public diplomacy is more effective than bilateral public diplomacy as global warming mitigation demands multilateralism: cities can easily scale up local innovations through benchmarking and connecting the local with the global.”

—Juan Luis Manfredi Sánchez & Francisco Seoane Pérez,
Climate Change Begins at Home:
City Diplomacy in the Age of the Anthropocene⁷

Expanding communication efforts between government and citizens to encourage involvement in multiple ways for people will be key in mobilizing action around climate sustainability goals. Currently, many efforts to combat the risks of climate change are happening within a sector’s community of experts and more cross-sectoral collaboration would help efforts expand. To reach greenhouse emission reduction goals, “governments need to mobilize the civil society, including both private companies and consumers, to change production and consumption patterns in a more climate-friendly direction.”⁸ New policies can provide incentives to change procurement processes, supply chain structure, and consumer habits to shift collective action towards climate sustainability rather than reactivity to climate crises.

⁵ Amiri, S. and Dossani, R. (2019, November 22). [City Diplomacy Has Been on the Rise. Policies Are Finally Catching Up](https://www.rand.org/blog/2019/11/city-diplomacy-has-been-on-the-rise-policies-are-finally.html). RAND Corporation, *The RAND Blog*, Commentary. Retrieved from <https://www.rand.org/blog/2019/11/city-diplomacy-has-been-on-the-rise-policies-are-finally.html> & Herrera Amul, G. and Shrestha, M. (2015, July). [Cities and Climate Diplomacy](https://climate-diplomacy.org/sites/default/files/2020-10/2015-Amul-Shrestha-City-Climate%20Diplomacy-Policy-Brief.pdf). Adelphi, supported by the German Federal Foreign Office, Climate Diplomacy, Policy Brief. Retrieved from

<https://climate-diplomacy.org/sites/default/files/2020-10/2015-Amul-Shrestha-City-Climate%20Diplomacy-Policy-Brief.pdf>
⁶ [C40 Knowledge Hub](https://www.c40knowledgehub.org/s/article/Why-city-diplomacy-is-vital-to-meeting-your-citys-climate-ambitions?language=en_US). (2021, February). [Why city diplomacy is vital to meeting your city’s climate ambitions](https://www.c40knowledgehub.org/s/article/Why-city-diplomacy-is-vital-to-meeting-your-citys-climate-ambitions?language=en_US). Retrieved from https://www.c40knowledgehub.org/s/article/Why-city-diplomacy-is-vital-to-meeting-your-citys-climate-ambitions?language=en_US

⁷ Sánchez, J. and Pérez, F. (2020, October 27). [Climate Change Begins at Home: City Diplomacy in the Age of the Anthropocene](https://link.springer.com/chapter/10.1007/978-3-030-54552-9_3). Public Diplomacy and the Politics of Uncertainty, pages 57-81. Retrieved from https://link.springer.com/chapter/10.1007/978-3-030-54552-9_3

⁸ Thøgersen, J. (2021, December). [Consumer behavior and climate change: consumers need considerable assistance](https://www.sciencedirect.com/science/article/pii/S2352154621000309). *Science Direct, Current Opinion in Behavioral Sciences*, Volume 42, pages 9-14. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2352154621000309>

Expo 2020 Dubai and the 2028 Olympics in Los Angeles offer templates for identifying the economic opportunities of climate change as a tenet of sustainability planning.

In November 2021, the City of Dubai surpassed the development targets outlined in its plan to host the most sustainable World Expo in history.⁹ Accomplishments reported in the [Expo 2020 Dubai Sustainability Report](#) included reducing the energy demand of permanent buildings by 33% and a drop in water demand in its buildings by 53%. Infrastructure was put in place so that 90% percent of all waste will be diverted from landfill during the event. Event planning considered the permanence of event infrastructure and 90% of all landscape plants are native or adaptive species.¹⁰ Expo 2020 Dubai's legacy megaproject, "District 2020", will repurpose 80% of the event infrastructure and "serve as a model global community for the future, utilising state-of-the-art innovation, science and sustainability for a cleaner, safer, healthier environment to live, work and play. A diverse, inclusive and human-centric urban community in the heart of new Dubai, it will attract large organisations, budding young enterprises and families to live and work." Dubai's event planning offers a template for attracting investment and partnerships while maximizing the opportunity for sustainable development in a growing global city.

The City of Los Angeles was recently awarded the bid for the 2028 Summer Olympics and recognizes that hosting this global mega-event is an opportunity to attract investment for sustainable infrastructure that will serve the city's residents long after the event is over. "No single project can address all of LA's environmental needs... rather, engaging in many diverse projects could provide an opportunity for synergies" for low-impact development (LID) projects that utilize natural processes to alleviate the environmental impact of increasing urbanization.¹¹ The city is in the process of building out its new transit system to achieve goals to alleviate traffic congestion and expand transit accessibility. The City of Los Angeles' [SmartLA 2028](#) strategy lays out plans to implement a new city-wide digital infrastructure, which provides a template for how to integrate many threads of a comprehensive city planning process: technology, infrastructure, data, governance ecosystems, and inclusion. "The city's infrastructure plan for the games strikes a balance between revitalizing or capitalizing on existing infrastructure to address the needs of the community and expanding the infrastructure required to handle the sudden temporary influx of people for the games."¹²

Los Angeles was named a leader on CDP Worldwide's [Cities A-List](#) for 2019, 2020, and 2021 demonstrating climate leadership through concerted and effective action, just as national

⁹ Expo 2020 Dubai UAE. [Our commitment to sustainability](#). Expo Initiatives. Retrieved from <https://www.expo2020dubai.com/en/understanding-expo/expo-initiatives/sustainability-at-expo>

¹⁰ Mitchell, B. (2021, October 11). [Expo 2020 Dubai releases 2020 sustainability report](#). *Blooloop*, Museums. Retrieved from <https://blooloop.com/museum/news/expo-dubai-sustainability-report/>

¹¹ Johnson, N., Patel, K., and Catlin, J. (2020, February 11). [Green Infrastructure in Los Angeles: An Olympian Feat](#). RAND Corporation, *The RAND Blog*, Commentary. Retrieved from <https://www.rand.org/blog/2020/02/green-infrastructure-in-los-angeles-an-olympian-feat.html>

¹² Elder, M. (2020, June 29). [Sustainable Infrastructure for LA's 2028 Olympics and Beyond](#). Burns McDonnell, Benchmark Brief, Environmental. Retrieved from <https://blog.burnsmcd.com/sustainable-infrastructure-for-las-2028-olympics-and-beyond>

governments were asked to do at the United Nations Climate Change Conference (COP26).¹³ “However, with a combined population of 108 million, A-List cities represent only a tiny proportion of the 4.2 billion people who live in cities worldwide. This highlights the urgent need for more cities to raise their climate ambition post-COP26.”¹⁴

A key part of any climate sustainability strategy will be identifying new economic opportunities such as increased infrastructure investment, development of new business industries, and improved efficiency of operations. Meanwhile, market trends support the investment in new technologies, with 2019 data from the World Resources Institute and the International Labour Organization reporting that “renewable energy and storage are becoming cost-competitive with fossil fuel generation”¹⁵ and “a low-carbon economy would create four times as many jobs around the world than it would destroy.”¹⁶

The current climate situation requires a shift in narrative from individual responsibility to shared responsibility. It is vital to initiate a new wave of leadership in companies and government to implement access to climate sustainability education and training. New technologies and sustainability practices are being implemented, but the time has come to fully embrace them.

Recommended policy actions

- Invest in providing equitable access to information, education, and real-time data reporting on actions that help versus harm progress towards climate sustainability goals
- Incentivize consumer behavior towards action that will support climate sustainability goals, with an emphasis on household and business incentives
- Recognize that the implications of climate change will adversely affect vulnerable populations and integrate social equity into all future policy-making
- Include workforce preparedness into climate policy plans
- Deploy public relations narratives that emphasize a plan for collective action, rather than individual responsibility
- Curate examples of the impact of collective action, particularly through investing in technology that will allow us to gather and display real time data
- Target more diverse audiences with more specific messaging; if messaging is too broad, it may fail to galvanize action in any meaningful direction

¹³ CDP Worldwide. (2021, November 18). [CDP unveils new generation of 95 cities leading on global climate action](https://www.cdp.net/en/articles/cities/cdp-unveils-new-generation-of-95-cities-leading-on-global-climate-action). Retrieved from <https://www.cdp.net/en/articles/cities/cdp-unveils-new-generation-of-95-cities-leading-on-global-climate-action>

¹⁴ CDP Worldwide. (2021, November 18). [Cities A List 2021](https://www.cdp.net/en/cities/cities-scores). Retrieved from <https://www.cdp.net/en/cities/cities-scores>

¹⁵ Jaeger, J. and Saha, D. (2020, July 28). [10 Charts Show the Economic Benefits of US Climate Action](https://www.wri.org/insights/10-charts-show-economic-benefits-us-climate-action). World Resources Institute, Finding, Climate. Retrieved from <https://www.wri.org/insights/10-charts-show-economic-benefits-us-climate-action>

¹⁶ BNP Paribas. (2019, September 26). [The fight against climate change: a source of economic growth](https://group.bnpparibas/en/news/fight-climate-change-source-economic-growth). BNP Paribas, Corporate Social Responsibility. Retrieved from <https://group.bnpparibas/en/news/fight-climate-change-source-economic-growth>

Resources and frameworks to consider

[America's New Climate Economy](#)

World Resources Institute

working paper illustrating how investments in low-carbon infrastructure can help set up the US economy up for success while also demonstrating how delays in acting on climate sustainability will cause costly damage

[Sustainability Best Practices Framework](#)

Institute for Local Government

10 key areas for local action towards achieving sustainability goals

[2021 Climate Adaptation Plan](#)

United States Department of Defense

a template for climate sustainability workplace preparedness, including facilities, infrastructure, and training

[Climate Equity Resources](#)

UCLA Luskin Center for Innovation

site offering a variety of tools in achieving “both protection from environmental hazards as well as access to environmental benefits for all, regardless of income, race, and other characteristics”

[Consumer behavior and climate change: consumers need considerable assistance](#)

Current Opinion in Behavioral Sciences

report outlining how governments can change production and consumption patterns in a more climate-friendly direction

Half of the world's population currently lives in urban areas and that number is predicted to increase by two-thirds by 2050, exacerbating poverty, food insecurity, and malnutrition.¹⁷

"Food security and nutrition are complex issues, but cities are the biggest consumers of food. Cities can really trigger the change needed to make our food systems more sustainable and reduce related emissions. They can boost local food economies. They can turn food into a means of social inclusion. They can promote new and more sustainable consumption patterns. Most importantly, cities have the possibility to listen to their citizens and make their voices heard, bridging the local and the global level."

—Giuseppe Sala, Mayor of Milan, Italy,
EAT Forum¹⁸

Water and food are inextricably connected. Global cities' future access to both depends on the ability to adapt resource management, supply chains, and consumer behavior to focus on our planet's new ecosystems created by climate change.

"Agriculture can thrive in hot weather and cold, in ample sunlight or heavy cloud cover. It cannot succeed, however, without water. Careful planning and good-faith cooperation between urban and rural areas can stabilize water supplies, provide mutual resilience to drought, and increase both water security and economic prosperity."

—Lauren Nicole Core & Stephane Dahan,
Water Global Practice, The World Bank¹⁹

¹⁷ EAT Forum. [Food Insecurity: Cities at the Frontline](https://eatforum.org/learn-and-discover/food-insecurity-cities-at-the-frontline/), EAT Forum, Learn & Discover. Retrieved at <https://eatforum.org/learn-and-discover/food-insecurity-cities-at-the-frontline/>

¹⁸ Sala, G. [Food Insecurity: Cities at the Frontline](https://eatforum.org/learn-and-discover/food-insecurity-cities-at-the-frontline/). EAT Forum. Retrieved from <https://eatforum.org/learn-and-discover/food-insecurity-cities-at-the-frontline/>

¹⁹ Core, L. and Dahan, S. (2019, October 9). [Innovative solutions to water scarcity: what we can learn from California's heartland](https://blogs.worldbank.org/water/innovative-solutions-water-scarcity-what-we-can-learn-californias-heartland). The World Bank, The Water Blog. Retrieved from <https://blogs.worldbank.org/water/innovative-solutions-water-scarcity-what-we-can-learn-californias-heartland>

Sustainable plans for climate resilience must include water and food security goals, utilizing the opportunity for cross-sectoral collaboration as a force for community-building.

Policy is not being developed quickly or holistically enough to clearly communicate relevant data and act on proposed solutions to leading water and food security challenges. These key actions can be taken by cities: providing a more efficient way to measure and communicate resource usage, using a collaborative approach to assessing future projections, and emphasizing cross-sectoral planning for quick action. With multiple, interconnected layers to water and food security, a proper sustainability strategy will take into account all possible levels of action to propose cross-sectoral solutions.

First, an effective city plan must explore food loss and waste in the supply chain, including an examination of the interconnectedness of rural areas and urban centers. A few examples include: San Francisco, California's zero waste policy,²⁰ Cape Town, South Africa's use of social capital,²¹ and Toronto, Canada's application of green economic development paired with disease prevention and social justice.²² To support planning and implementation, the city of Medellín, Colombia created an inter-institutional taskforce called "El Buen Vivir"²³ while Baltimore, Maryland formed a Resident Food Equity Advisor group to advise the city's Healthy Food Environment Strategy, policies and plans.²⁴

Second, it will be crucial to explore emerging technologies like wastewater recycling and smart metering to deploy as part of an effective resource management plan. The United Arab Emirates is developing innovative practices like vertical farming and harvesting freshwater from fog and clouds.²⁵ In particular, the establishment of the International Center for Biosaline Agriculture in Dubai 20 years ago has led to developing federal environmental guidelines and standards to monitor and manage the discharges from desalination plants in the United Arab Emirates.²⁶

²⁰ United States Environmental Protection Agency. [Managing and Transforming Waste Streams – A Tool for Communities: Zero Waste Case Study: San Francisco](https://www.epa.gov/transforming-waste-tool/zero-waste-case-study-san-francisco). Retrieved from <https://www.epa.gov/transforming-waste-tool/zero-waste-case-study-san-francisco>

²¹ Oliver, D. (2017, January 15). [Urban agriculture means food plus social cohesion](https://www.iol.co.za/capetimes/news/urban-agriculture-means-food-plus-social-cohesion). *Independent Online, Cape Times*. Retrieved from <https://www.iol.co.za/capetimes/news/urban-agriculture-means-food-plus-social-cohesion-2096857>

²² City of Toronto Public Health. (2021, May). [Cultivating Food Connections: Toward a Healthy and Sustainable Food System for Toronto](http://feedva.org/wp-content/uploads/2019/02/Cultivating-Food-ConnectionsToronto-Food-Strategy-FINAL.pdf). Retrieved from <http://feedva.org/wp-content/uploads/2019/02/Cultivating-Food-ConnectionsToronto-Food-Strategy-FINAL.pdf>

²³ Food and Agriculture Organization of the United Nations. (2016, October 3). [Moving ahead in the city region food system of Medellín: creation of an inclusive food system governance body](https://www.fao.org/in-action/food-for-cities-programme/news/detail/en/c/447315/creation-of-an-inclusive-food-system-governance-body). Food and Agriculture Organization of the United Nations, City Region Food Systems Programme, News. Retrieved from <https://www.fao.org/in-action/food-for-cities-programme/news/detail/en/c/447315/creation-of-an-inclusive-food-system-governance-body>

²⁴ Housing Authority of Baltimore City Family Developments. (2020) [2020 Resident Food Equity Advisors Food and Public Housing Recommendations](https://planning.baltimorecity.gov/sites/default/files/RFEA_2020_Recommendations_Final.pdf). City of Baltimore, Food Policy & Planning. Retrieved from https://planning.baltimorecity.gov/sites/default/files/RFEA_2020_Recommendations_Final.pdfhttps://planning.baltimorecity.gov/sites/default/files/RFEA_2020_Recommendations_Final.pdf

²⁵ Fishlock, B. (2018, June 3). [Gulf states look beyond solar with foggy renewable vision](https://www.arabnews.com/node/1314941/business-economy). *Arab News*. Retrieved from <https://www.arabnews.com/node/1314941/business-economy>

²⁶ [International Center for Biosaline Agriculture](https://www.biosaline.org/resources), Resources. Retrieved from <https://www.biosaline.org/resources>

Global cities must change the way they use water. For example, water in Los Angeles is used quickly and in volumes that exceed the natural recharge cycle of the region. There is a lack of dialogue around how food and water are connected issues, as is the case for the majority of water usage in California being dedicated to food production.²⁷ We can start to rely on alternative sources of water, similar to the way the United Arab Emirates is exploring harvesting fog, and promoting biodiverse crops that can be irrigated with saline water. To be included in the dialogue is the water needed to support livestock; to create grass and feed for animals we can embrace the use of treated wastewater as an alternative. Additionally, there is a relationship between growing population and poverty, and there must be a financial willingness to invest in vulnerable communities whose access to steady food and water is already being denied.

Third, city planning for success in water and food security will include the integration of Indigenous knowledge into the future planning for food and water security. Indigenous practices previously created unprecedented stability for resource use, practices that involved the lowest levels of water usage, but yielded the highest nutritional value crop. Research from the University of Hawai'i at Manoa and the Hawai'i Conservation Alliance in Honolulu defines this practice to be an "Indigenous Resource Management paradigm," noting that "inclusion of Indigenous perspectives can increase the value and success of conservation initiatives."²⁸ To create a stable future, we can learn from examples that work and study success stories to determine what can be duplicated in current practices. Marginalized communities must be included in dialogue around planning to allow for problem solving to be equitable.

To support policy work, it can be critical to deploy a communications campaign to educate what the issues are, why these issues matter, changes that individual consumers can make, incentives for businesses, and plans for urban areas to cooperate with rural areas, similar to the community-based work of the Los Angeles Food Policy Council and the Centre for Agriculture and Bioscience International (CABI). More data can be collected and distributed to illustrate what consumption and waste trends are emerging. When trends can be clearly communicated, especially in real-time, then it can be motivation for behavior change. From soil health and quality, to water, food, and waste – all trends need to be measured, tracked, and managed in a more effective way to help orient action plans and goals.

²⁷ Hanah, E. and Mount, J. (2019, May). [Water Use in California](https://www.ppic.org/publication/water-use-in-california/). Public Policy Institute of California, Fact Sheet. Retrieved from <https://www.ppic.org/publication/water-use-in-california/>

²⁸ Harmon, K., Winter, K., Kurashima, N., Fletcher, C., Kane, H., and Price, M. (2021, April 1). [The role of indigenous practices in expanding waterbird habitat in the face of rising seas](https://scholarspace.manoa.hawaii.edu/bitstream/10125/76562/Harmon%20et%20al.%202021_The%20role%20of%20indigenous%20practices%20in%20expanding%20waterbird%20habitat%20in%20the%20face%20of%20rising%20seas.pdf). *Anthropocene*, 34. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/76562/Harmon%20et%20al.%202021_The%20role%20of%20indigenous%20practices%20in%20expanding%20waterbird%20habitat%20in%20the%20face%20of%20rising%20seas.pdf

Recommended policy actions

- Incorporate Indigenous agricultural and resource management practices, exploring the connection between culture and land
- Address food loss and waste as a source of instability in local and regional food chains
- Embrace technologies that help explore alternative sources of water and new ways to manage it
- Create forums for concrete and cohesive collaboration across sectors such as science, technology, policy, and government
- Upgrade the way we monitor our food systems and water resource usage to be consistently measured, managed, and communicated
- Explore supply chain innovations and add value to the food cycle by implementing a circular economy that emphasizes sustainable growth
- Provide education and resources to implement community-based solutions to erosion, flooding, wildfires, and resource instability

Resources and frameworks to consider

[Sustainable food systems: Concept and framework](#)

Food and Agriculture Organization of the United Nations

a template for an intersectional system that achieves economic sustainability, social sustainability, and environmental sustainability

[17 Principles for Water-Wise Cities](#)

International Water Association

resource helping city leaders ensure everyone in their cities has access to safe water and sanitation

[EAT-Lancet Commission Brief for Cities](#)

EAT Forum

a report identifying actions cities can take to contribute to the Great Food Transformation

[Food Security, Safety, and Sustainability—Getting the Trade-Offs Right](#)

Frontiers in Sustainable Food Systems

an article explaining that “the trade-offs between food safety and security are fraught with challenges” and outlining how to integrate the many goals of sustainability, food security, and food safety

[The Palgrave Handbook of Climate Resilient Societies](#)

Palgrave Macmillan

a collection of case studies that offer a comprehensive overview of global attempts to create climate-resilient societies

[Water Scarce Cities: Thriving in a Finite World](#)

World Bank Group

working paper illustrating approaches to inspire a new kind of urban water security, based on past cities' successful responses to water scarcity

[Local Innovations for Global Water Security](#)

World Bank Group

working group report compiling innovative approaches in transforming value chains, promoting circular economies through wastewater treatment, and water resiliency planning

PANDEMIC RESPONSE & DISASTER PREPAREDNESS

Networks and existing relationships built through diplomacy will be one of the strongest assets in tackling the response to future crises and disaster recovery. The goal for disaster response efforts needs to be developing the necessary capabilities to be proactive instead of remaining reactive to global crises. Current infrastructure and communications are not nearly prepared enough for future pandemics that are statistically predicted to strike again within a decade.

“The nature, frequency, and messaging in the communication that the [UAE] government is taking, boasts of information, connectivity, and authenticity — all pillars of authentic communication that is a critical ingredient in crisis communications.

—Mai El-Kinawi,
Observer Research Foundation²⁹

The United Arab Emirates COVID-19 pandemic recovery provides a template for disaster response and preparedness, emphasizing the importance of transparency, partnerships, and strategic communication.

The City of Los Angeles implemented one of the strictest vaccine mandates in the country in November 2021 as its main tactic in curbing COVID-19 cases across the metropolitan area.³⁰ As many global cities work to mitigate the effects of the pandemic, the City of Abu Dhabi was named the top global city in vaccination rates in the [COVID-19 City Safety Ranking Q2/2021](#) by Deep Knowledge Analytics (DKA). High rates of vaccination and COVID-19 infection mitigation were due to many coordinated factors: UAE government leaders were vaccinated early as part of a campaign to set an example of safety and community responsibility, efficient supply chain and logistics systems were made a top priority as were accessibility and delivery, and strict measures against unvaccinated populations were put in place.

The [Elsevier Public Health Emergency Collection](#) explains that the UAE’s public health tactics were an exemplary case study: “a better approach than putting pressure on vaccine hesitant or resistant individuals to get vaccinated is to foster community trust through enhanced transparency on national COVID-19 infection, mortality, and vaccination rates while minimizing actions that can negatively affect community trust [and] providing vaccination in places where

²⁹ El-Kinawi, M. (2020, April 29). [UAE gets COVID-19 response right: A note from within](#). Observer Research Foundation, Expert Speak, Health Express. Retrieved from <https://www.orfonline.org/expert-speak/uae-gets-covid19-response-right-note-within-65363/>

³⁰ Singh, M. (2021, November 13). [LA has imposed one of the US’s strictest vaccine mandates. Will it prevent a Covid surge?](#) *The Guardian*. Retrieved from <https://www.theguardian.com/us-news/2021/nov/13/los-angeles-vaccine-mandate-covid-surge>

people are comfortable such as workplaces, schools, shopping centers, religious sites, etc., especially in the minority population who might be unwilling to visit health facilities.”

Investing in the necessary infrastructure to make data available has proved crucial to disaster response. Prior to the pandemic, Los Angeles has led rankings from the World Council on City Data and US City Open Data Census for its efforts in open data.³¹ A major pandemic initiative implemented by the LA Mayor's Office Innovation Team and the LA County Department of Public Health was to partner with Slalom to visualize the trends in vaccination coverage, cases, and deaths across the city's 139 neighborhoods.³² Jeanne Holm, Chief Data Officer for the City of Los Angeles explained that, “We wanted to share this data in a transparent way. What the mayor sees is exactly what the public sees.”³³ Similarly, the UAE's choice to communicate with honesty about new cases, recovered cases, and death tolls, as well as vaccination coverage, helped maintain credibility and combat misinformation. “Government communication was committed to a set of values including equality between citizens of the state and residents, societal and individual responsibility, recognising the frontline medical staff and acknowledging their sacrifices. The UAE implemented an integrated, coherent and effective scenario to deal with the crisis. It developed risk communication strategies in health communication to manage the COVID-19 crisis by following international standards and also took into account its own political, economic, social and cultural features.”³⁴

The challenges of the COVID-19 pandemic also highlighted the need for ongoing collaborative communication between local communities and government. If public health information is changed or updated, the UAE government disseminates clear messaging across diverse media channels, with information available in many languages to address more than 200 nationalities living in the state, reflecting knowledge of key target audiences and embracing the country's diverse population of immigrants that make up 88% of its population.³⁵ California “is the world's fifth largest supplier of food and agricultural commodities” with 185 languages spoken throughout the Los Angeles Metropolitan area.³⁶ Farmworkers and immigrant communities in LA, “many of whom lack access to healthcare and can't afford to stay home,” have been disproportionately infected in this pandemic and could have benefitted from

³¹ Office of Los Angeles Mayor Eric Garcetti. (2015, May 21) [LA Ranked #1 in US City Open Data Census](https://www.lamayor.org/la-ranked-1-us-city-open-data-census). Retrieved from <https://www.lamayor.org/la-ranked-1-us-city-open-data-census>

³² City of Los Angeles. COVID-19: Keeping Los Angeles Safe, [COVID-19 Neighborhood Map](https://coronavirus.lacity.org/Map). Retrieved from <https://coronavirus.lacity.org/Map>

³³ Slalom, Case Study, [City of LA: Shining a light on recovery and reopening](https://www.slalom.com/case-studies/city-la-recovery). Retrieved from <https://www.slalom.com/case-studies/city-la-recovery>

³⁴ Radwan, F. and Mousa, S. (2021). [Government Communication Strategies during Coronavirus Pandemic: United Arab Emirates Lessons](https://journals.sagepub.com/doi/pdf/10.1177/0972063420983091). *Journal of Health Management*, Indian Institute of Health Management Research. Retrieved from <https://journals.sagepub.com/doi/pdf/10.1177/0972063420983091>

³⁵ Gray, A. (2017, February 10). [Which countries have the most immigrants?](https://www.weforum.org/agenda/2017/02/which-countries-have-the-most-immigrants/) World Economic Forum. Retrieved from <https://www.weforum.org/agenda/2017/02/which-countries-have-the-most-immigrants/>

³⁶ Barragan, B. (2015, November 4). [More Than Half of Los Angeles Speaks a Language Other Than English at Home](https://la.curbed.com/2015/11/4/9904020/los-angeles-languages). *Curbed Los Angeles*. Retrieved from <https://la.curbed.com/2015/11/4/9904020/los-angeles-languages> & Singh, M. (2020, July 5). [‘They feel invincible’: how California’s coronavirus plan went wrong](https://www.theguardian.com/us-news/2020/jul/05/california-coronavirus-outbreak-cases-went-wrong). *The Guardian*. Retrieved from <https://www.theguardian.com/us-news/2020/jul/05/california-coronavirus-outbreak-cases-went-wrong>

communications tactics like those deployed by the UAE.³⁷ “The pandemic is not only exacerbated by the deprivations and vulnerabilities of those left behind by rising inequality but its fallout is pushing inequality higher...” a trend that should be taken into account in disaster preparedness efforts for cities around the world.³⁸ Strategic communications and taking command of the public narrative are critical tools in ensuring safety, and these tactics can also create more effective synergy between the city and national levels of management.

The COVID-19 pandemic reveals the value of international relationship-building and maintaining and the role of cities as connectors. Pre-established relationships that grew from existing diplomatic programs helped global cities more closely collaborate and support other countries. Consuls General led efforts in cities around the world and played crucial roles in distributing information, aid, and supplies. For example, Mayor Eric Garcetti, as chair of the [C40 Cities Network](#), convened this network to discuss how to manage COVID-19 and share best practices, even though it was a network previously established to tackle climate change challenges in cities around the world. The United Arab Emirates also provided foreign aid to 135 countries during the COVID-19 pandemic.³⁹ “For example, Abu Dhabi Medical Devices Company, together with international partners, has provided more than 500 million syringes and needles for the COVID-19 vaccines, equivalent to 25% of UNICEF and COVAX's global needs by 2021.”⁴⁰ City Diplomacy is a template for future success in managing disaster responses, recovery, and preparedness. Sharing case studies and promoting a culture of collaboration will be key in being able to respond properly to global crises. It's crucial to the survival of cities to find a way to make cooperation standard, not exceptional.

Recommended policy actions

- Craft disaster preparedness and recovery strategies that are people-centered, identifying disproportionate impacts and supporting vulnerable groups
- Invest in effective information dissemination systems and accompany future policies with a plan to manage the public's reaction and expectations as crucial components of mitigating future disasters
- Upgrade research and development efforts to efficiently adapt response mechanisms to evolving climate change threats
- Leverage the private sector role in emergency management to meet the levels of preparedness necessary to guard against future global crises

³⁷ Singh, M. (2020, July 5). [‘They feel invincible’: how California's coronavirus plan went wrong](https://www.theguardian.com/us-news/2020/jul/05/california-coronavirus-outbreak-cases-went-wrong). *The Guardian*. Retrieved from <https://www.theguardian.com/us-news/2020/jul/05/california-coronavirus-outbreak-cases-went-wrong>

³⁸ Qureshi, Z. (2020, November 17). [Tackling the inequality pandemic: Is there a cure?](https://www.brookings.edu/research/tackling-the-inequality-pandemic-is-there-a-cure/) Brookings, Report. Retrieved from <https://www.brookings.edu/research/tackling-the-inequality-pandemic-is-there-a-cure/>

³⁹ The United Arab Emirates' Government portal. [The UAE's global efforts to combat the COVID-19 outbreak](https://u.ae/en/information-and-services/justice-safety-and-the-law/handling-the-covid-19-outbreak/humanitarian-efforts). Retrieved from <https://u.ae/en/information-and-services/justice-safety-and-the-law/handling-the-covid-19-outbreak/humanitarian-efforts>

⁴⁰ Alsuwaidi, A. (2021, July 27). [The COVID-19 response in the United Arab Emirates: challenges and opportunities](#). *Nature Immunology*, World View.

Resources and frameworks to consider

[Models of Relief Learning from Exemplary Practices in International Disaster Management](#)

RAND Corporation

working paper detailing case studies of thirteen natural disasters in eleven countries focused on disaster management activities at many phases, including prevention and preparedness, response, recovery, and redevelopment

[Practical Lessons for Recovery from the COVID-19 Pandemic](#)

United Nations Office for the Coordination of Humanitarian Affairs

a consultative document that offers a roadmap of options to help guide recovery efforts, based on applied disaster recovery experience, focused on upholding principles such as green infrastructure, inclusive and people-centered recovery, and preserving development gains

[Government Communication Strategies during Coronavirus Pandemic: United Arab Emirates Lessons](#)

Indian Institute of Health Management Research

an article from the *Journal of Health Management* breaks down the UAE's communications tactics such as clarification of measures strategy, reassurance strategy, ambiguity reduction strategy, behavior efficacy strategy, correcting misinformation and rumors, and advising strategy

[After Great Disasters](#)

Lincoln Institute of Land Policy

in-depth analysis of how six countries managed community recovery in the aftermath of natural disasters

CONCLUSION: CHARTING A COURSE FOR A MORE RESILIENT FUTURE

Across all three policy themes presented in this paper, there is a disconnect between resource management policies and the speed at which they need to be implemented. Existing systems and policies don't support change and haven't been designed to accommodate new ideas. In diagnosing policy needs for aspects like food security or resources management, the timeline of implementation is much slower than needed and synergy is missing between discovery and action phases of city management. Subject matter experts have come up with solutions that are tested and are ready to be utilized, but bureaucratic barriers present immense challenges to actually implementing much-needed changes.

Investing in the infrastructure to make data widely available is crucial to the majority of effective plans for climate sustainability. The ability to move with agility in crisis management is a necessary element in order to make decisions early and in pace with the evolution of climate change and disaster preparedness. Being able to respond in a more agile way to future local crises can help prevent them from becoming global crises. Likewise, the global situation will always dictate the local situation.

Transformational changes towards achieving climate sustainability, security, and disaster preparedness will be more effective when paired with efforts that strive to create societal equity. Many of the above solutions could create new imbalances and reinforce existing inequities in society. Traditional sustainability topics such as conserving water, energy, and waste are important but discussing inclusion, environmental justice, and culture and health are also important to weave into all conversations about climate sustainability. Decision-making needs to happen on all levels, down-up grassroots methods and top-down methods, in order to create the quick change needed in global cities. A major asset in creating change will be to recognize the differential power dynamics that exist and put measures in place that bring everyone to the table, including marginalized, low-income communities, giving all stakeholders an equal say in this dynamic conversation about our collective future.

ADDENDUM

Opportunities for Future Collaboration

As the goal of this paper is to encourage new ways of tackling today's most pressing global issues, below are a few ideas for new partners and existing best practices in each of the three policy arenas discussed above.

Climate Sustainability

As sites for hosting crucial cultural gatherings fostering international cooperation, global cities are positioned to serve as leading examples of infrastructure innovation, regional resource economization, and climate adaptability efforts. Hosting a global event provides a local government with an incentive to not only set goals, but also to implement action on a set timeline. The strategic planning templates applied to preparing for Expo 2020 Dubai and the Los Angeles Olympics 2028 will serve as examples for future global events so that they remain focused on offering an opportunity for constructive international relations, instead of further exacerbating the effects of climate change, high levels of national debt, and social inequality. Other cities that could offer additional input to this dialogue include Vancouver, Canada and Reykjavik, Iceland. Vancouver is well known for its efforts to address environmental challenges since the 1990s and is a global leader in transit infrastructure, its plan to transition to zero emissions buildings, its commitment to achieving zero waste, and its planning to increase urban green spaces while also communicating about green opportunities for residents and businesses. Meanwhile, Reykjavik is a city that has a well-earned reputation for excellence in renewable energy engineering, upheld by Iceland's commitment to be a country completely free of fossil fuels by 2050.

Water & Food Security

Outstanding city partners that are achieving food security include Quito, Ecuador⁴¹ Medellín, Colombia⁴² Amsterdam, The Netherlands⁴³ and Quezon City, Philippines⁴⁴ all of which have a dedicated food security plan, including serving as pilot cities for the [City Region Food Systems Programme](#). Effective city partners on achieving water security could include Rome, Italy and Cape Town, South Africa which have faced water shortages in the past and, as a result, can

⁴¹ Resilient Cities Network. [The Transformative Impact of Quito's Resilient Food Security Program](https://resilientcitiesnetwork.org/urban_resiliences/quito-food-program/). Retrieved from https://resilientcitiesnetwork.org/urban_resiliences/quito-food-program/

⁴² Food and Agriculture Organization of the United Nations. (2020, April 29). [City region food systems in Medellín, Colombia: A pathway of governmental and territorial integration to face the COVID-19 crisis](#). Food and Agriculture Organization of the United Nations, City Region Food Systems Programme, News. Retrieved from <https://www.fao.org/in-action/food-for-cities-programme/news/detail/en/c/1273338/>

⁴³ Dutch Ministry of Foreign Affairs. [Food and nutrition security](#). Dutch Development cooperation, Results, Themes, Food security, Food and nutrition security. Retrieved from <https://www.dutchdevelopmentresults.nl/2019/theme/food-security>

⁴⁴ Oyuela, A. [Building Food and Nutrition Resilience in Quezon City, Philippines](#). United Nations Children's Fund & EAT Forum. Retrieved from https://eatforum.org/content/uploads/2020/12/Case-study_Quezon-City-Food-and-Nutrition-Resilience-EAT-UNICEF-QUEZON.pdf

offer case studies for how they are tackling these challenges in the future. Future integration of Indigenous agricultural practices could include the [National Farm to School Network](#), [White Earth Land Recovery Project](#), and [MA'O Organic Farms](#).

Pandemic Response & Disaster Preparedness

Current global crises such as displacement, famine, and unemployment are looming. Cities will need to plan for how they will respond and recover when disasters occur within a region, and prepare for how crises might affect resource management and further expose urban centers to the risks of climate change. Many global cities share concerns similar to those of Los Angeles for high temperatures and wildfire management. A study of air quality initiatives for wildfire management in Santiago, Chile⁴⁵ and surveys of urban heat islands, like those in Lisbon, Portugal⁴⁶ could provide research crucial to helping craft a strategy to reinforce California's preparedness against seasonal wildfires. In addition to Abu Dhabi's exemplary COVID-19 response efforts, DKA's [COVID-19 City Safety Ranking Q2/2021](#) named Singapore as the top city in Economic Resilience during the pandemic, while Seoul, South Korea was the top city in Healthcare Management. A report on the key takeaways from best practices on these three cities would provide a template for future health crises in urban spaces.

⁴⁵ Raich, W. (2018, September 28). [Santiago Megacities Partnership Final Report](#). Environmental Protection Agency. Industrial Economics, Incorporated in collaboration with the Ministerio del Medio Ambiente, Chile. Retrieved from https://www.epa.gov/sites/production/files/2019-02/documents/santiago_megacities_partnership_final_report.pdf

⁴⁶ Nogueira, M., Lima, D., and Soares, P. (2020, December). [An integrated approach to project the future urban climate response: Changes to Lisbon's urban heat island and temperature extremes](#). *Urban Climate*, Volume 34. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2212095520302625>

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