Adapting U.S. Foreign Assistance for a Rapidly Urbanizing World

Gad Perry, Lesley A. Stone, and Obaidullah Obaid

Urban living has become the norm for more than half of humanity. The most rapidly urbanizing regions are in Africa and Asia, where many countries rely on foreign assistance. As international donors seek to achieve long-term development and humanitarian goals, urbanization will present a host of opportunities and challenges. It is worth noting that there is not a single, standard definition or numerical threshold of what constitutes "urban." This paper takes a broad view, accepting the definitions used in the underlying articles and analysis.[1] To help understand the opportunities and challenges offered by urbanization and the perceptions of foreign assistance professionals regarding current U.S. government foreign assistance and host-government priorities, we conducted a literature survey, new analyses of existing databases, a series of interviews, and a survey of diplomatic missions. Key findings included that more urbanized countries and regions tend to achieve higher educational and health outcomes, as well as increased gender equality; well-planned urbanization can expand delivery

Gad Perry is a professor of Conservation Biology at Texas Tech University. He served as a National Academies Jefferson Science Fellow from 2019 to 2020.

Lesley A. Stone is a Senior Advisor for Global Health in the Office of Foreign Assistance, U.S. Department of State.

Obaidullah Obaid is a Program Analyst with the Bureau of International Narcotics and Law Enforcement, U.S. Department of State. He was with the Office of Foreign Assistance, U.S. Department of State, until 2020.

of critical services including education and healthcare and is tied to improved innovation and economic productivity; and poorly-managed urbanization contributes to heightened inequality, poor governance, and fuel tensions that allow malign groups to operate. Yet interviews and questionnaires confirm that foreign assistance remains disproportionately focused on rural settings and that diplomats often lack credible and sufficient information upon which to base informed and effective decisions. Foreign assistance could be more effective if it had a stronger focus on urban environments.

Introduction

Most of the global human population is now urban.[2] Poorer countries are increasingly urbanizing and reaching urbanization thresholds at lower national income.[3] Within the next 100 years, urbanization rates in the more-developed and less-developed world will be similar.[4] Nearly 90 percent of the increase in urban residents expected by 2050, when some two-thirds of people will be urbanites, will be concentrated in Africa and Asia.[5] This ongoing demographic change modifies the context in which future U.S. foreign assistance will be delivered. It is thus essential to ensure that future U.S. foreign assistance in the context of the urban-rural continuum is strategic and effective. Here, we show data that bolster the argument that foreign assistance in urban settings is lacking, despite both being needed and showing great potential for effectiveness.

Tens of billions of U.S. dollars are committed to foreign assistance every year, and much of that money is administered by the U.S. Department of State and the U.S. Agency for International Development (USAID). An internal assessment of its urban policy implementation (USAID, 2019) recently concluded that even though "urban programming is underway in every region where USAID is working … there is a perceived institutional bias for rural development." The reasons for such a bias are unclear but appear quite prevalent in development organizations.[6] Unfortunately, neither the U.S. government nor, as far as we can tell, other governments that provide foreign assistance, regularly collect and share data that allow investments in urban areas to be tracked separately from those in non-urban areas.

We conducted a literature review to assess the current understanding of the challenges and opportunities that global urbanization provides in relation to foreign assistance, then performed new analyses to further explore identified urban implications using existing databases. We also undertook two surveys to explore the perceptions and strategies of U.S. government professionals abroad regarding urbanization in countries that receive U.S. foreign assistance. A full, sector-by-sector analysis of U.S. foreign assistance spending in urban versus rural

or peri-urban areas would be very useful yet is currently impossible because urban spending is not separately categorized.

Materials and Methods

Literature survey. We reviewed the literature to identify challenges and opportunities offered by urbanization relevant to the six U.S. Department of State categories of foreign assistance:[7] democracy, human rights, and governance (DRG); economic growth; education and social services; global health; humanitarian assistance (HA); and peace and security. We surveyed the peer-reviewed literature and published government and NGO reports, relying on academic search engines, as well as U.S. government (USG) and non-USG professionals with urban expertise, to identify additional sources. The information below is not intended to be comprehensive, but rather to summarize the state of affairs for each sector.

New analyses of existing data. Although urbanization has been of interest to organizations such as the World Bank for some time, prior analyses have not fully utilized the data they and others collected to explore urbanization in the present context. We therefore conducted new analyses, cross-referencing published datasets to further explore trends identified using the literature survey. Urbanization level data, used in many of the analyses, are taken from World Bank database.[8] All statistical analyses were conducted in SPSS 26.0 (IBM Corporation, Armonk, New York, United States). No new analyses were conducted on the peace and security sector, where no additional databases were identified as relevant.

Interviews. In November 2019, we visited two U.S. missions in African nations selected because they receive large amounts of U.S. foreign assistance and are relatively early in the process of urbanization. In both, unstructured interviews were held with available employees of the Department of State, USAID, other USG organizations, NGOs, local nationals, and non-U.S. foreign assistance organizations. Interviews lasted from thirty to ninety minutes and were sometimes held over several consecutive days. To minimize concerns with security and human subjects research, we present aggregate information only from this preliminary effort, which was based on unstructured discussions.

Survey. We sent a questionnaire to U.S. missions in select countries that receive U.S. foreign assistance across all regions of the globe. The questionnaire was designed based on findings from the interviews and feedback provided by a number of USG and non-USG professionals working in this broad arena. The survey had twenty-two questions, most of them allowing only a limited set of answers and was administered over the internet in January 2020. All questions asked for an organizational opinion, rather than an individual response, and we

consider them to be representative of USG efforts and opinions in a particular country. Twenty-one responses (> 50 percent response rate) were received. Because of the emergence of the novel coronavirus pandemic soon thereafter, no follow-up messages were sent to non-responding missions.

Results

Literature survey

1. Democracy, human rights, and governance (DRG). Rapid urbanization, especially unplanned urbanization taking the form of slums or informal settlements, can exacerbate societal inequalities, enable elite corruption, and place significant pressures on governance institutions.[9] Yet urban settings also allow for more gender equality, educational attainment, and workforce access.[10]

Cities have been the epicenter of political turmoil. Autocratic governments have responded aggressively by increasing their capacity to spy on urban populations. They often control both access to and sharing of information. China has been among the leaders of this model, exporting it to other countries with titles such as "Safe Cities" to make the technology more palatable. In addition, conflict induces migrations of displaced persons from rural areas to cities[11] increasing pressure on municipalities and impacting governance. At the same time, urban density enables collective action that promotes more inclusive governance.[12]

2. Economic growth and environmental sustainability. Urbanization is closely tied with national economic well-being.[13] World Bank and United Nations (UN) data reveal that more than 80 percent of global GDP is generated in cities. Moreover, meeting most UN Sustainable Development Goals requires involvement of urban and local actors, often results in loss of green space, and can decrease biodiversity by removing native habitats.[14] Urban areas also contribute almost 70 percent of global CO_2 emissions.[15] Yet there are also very substantial benefits. As cities grow, opportunities for interaction and innovation increase, resulting in a steady growth in national economic activity, a process called "combinatorial explosion" by economist Paul Romer. Urbanization is not a sufficient condition for economic advancement, however.[16] Cities that lack DRG capacity or institutional structures produce little economic growth while expanding.[17]

3. Education and social services. Concentration of populations in urban settings makes it easier to deliver educational services.[18] Access to education in general, and higher education in particular, therefore tends to be concentrated in urban settings, primarily in major cities. Access to education is one of the "pull" factors

drawing people from rural to urban settings, a migration that many governments in developing countries still seek to limit.

4. *Global health.* Until relatively recently, urban populations were especially disease-prone and suffered high mortality.[19] Although today urbanization generally has beneficial impacts on human health,[20] there are important differences in individual outcomes. For example, children of the urban poor fare less well than those of urban non-poor and, sometimes, rural dwellers—perhaps because of within-city income-related differences in access to health care.[21] Other health issues that can be associated with unplanned urban growth include pollution,[22] unsafe drinking water,[23] and other water, sanitation, and hygiene-related deficiencies, as well as nutrition that is calorie-rich but nutrient poor, leading to obesity, diabetes, and other metabolic problems.[24]

Greater mobility and transportation opportunities increase the risk of new infectious disease arrival in urban settings, where they can quickly take root and spread further. The 2019 Worldwide Threat Assessment of the U.S. Intelligence Community predicted "more frequent outbreaks of infectious diseases because of rapid unplanned urbanization"–as currently seen in the COVID-19 pandemic.[25] At the same time, urbanization can provide opportunities to deliver better health services to populations, promoting higher health standards.[26]

5. *Humanitarian assistance.* In 2017, USAID was engaged with over fifty countries, providing food assistance to tens of millions of people. Although it is common to imagine displaced persons in rural camps, some 60 percent of them were living in urban areas in 2016. Many displaced persons pause at several cities before settling permanently. Host populations in underdeveloped cities often lack the resources to support migrants, often resulting in animosity against already weak and marginalized populations.[27]

6. *Peace and security.* Armed conflicts and organized violence are increasingly taking place in urban settings.[28] Cities with poor governance and security can become hubs for extremist and illicit activity, sometimes coming under the control of criminal gangs and drug cartels.[29] Increased connectivity and mobility, as well as enhanced anonymity in the larger crowd, make urbanites better able to access information, implement, and export the disruptive plans of both "lone wolves" and organizations.[30] However, urban environments can also facilitate peacebuilding, breaking down group barriers, and formation of factions. When prosperity is increased, especially for youth, disaffection is reduced and the risk of disorder can be substantially decreased.[31]

New analyses of existing data

1. *Democracy, human rights, and governance (DRG).* Countries with higher urbanization rates typically rate more highly on participatory democracy and public-sector corruption. However, economic productivity is a strongly confounding factor. Once GDP is accounted for, the correlation becomes non-significant (participatory democracy index: $r = 0.033$, $p > 0.6$; public sector corruption: $r = 0.130$, $p = 0.096$).

2. *Economic growth and environmental sustainability.* We evaluated all countries ($n = 21$) for which data on both indicators were available for the entire period (1960-2018). Because the data for the low (0-20 percent) and the high (85-100 percent) end of the urbanization range were limited, we also added all countries ($n = 12$) for which data spanned more than 5 years and helped fill in those ranges. Small island nations where the entire population lives in one urban center were excluded as unrepresentative. Gross National Income (GNI) surged dramatically once urbanization reached a certain level--approximately 70 percent (Figure 1). A similar pattern is present across the different regions, indicated by distinct colors. While the process is roughly linear over a broad range of urbanization values, GNI increases sharply once high urbanization is reached. As a consequence, nations with high urbanization levels have significantly higher CO_2 emissions (rho = 0.869, $p < .001$). This relationship remains significant after GDP is factored out (partial correlation between urbanization and CO_2 emissions, accounting for per-capita GDP: partial correlation $r = 0.607$, $p = 0.04$). Urbanization does not consistently affect biodiversity (Principal Component Analysis of economic status, including urbanization and biodiversity, including sustainability. There was no correlation between the two factors [$p \approx 0.8$]).

3. *Education and social services.* Globally, more urbanized countries achieve significantly higher educational outcomes (Figure 2; Spearman's Rho = 0.625, two-tailed $p < 0.001$) even when GDP is accounted for (partial correlation; df = 175, $r = 0.441$, $p < 0.001$).

4. *Global health.* The relationship between urbanization level and life expectancy (Figure 3) is positive and highly statistically significant (countries: $n = 196$, Spearman's rho = 0.630, two-tailed $p < 0.001$; regions: $n = 46$, rho = 0.859, two-tailed $p < 0.001$). Significantly better health outcomes, as measured by longevity, remained after accounting for national economic output (partial correlation analysis; countries: $n = 183$, $r = 0.581$, two-tailed $p < 0.001$; regions: $n = 43$, $r = 0.860$, two-tailed $p < 0.001$).
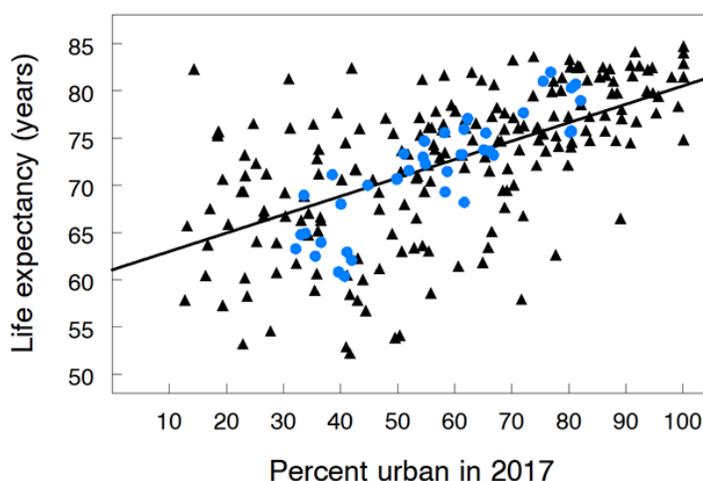
Figure 1
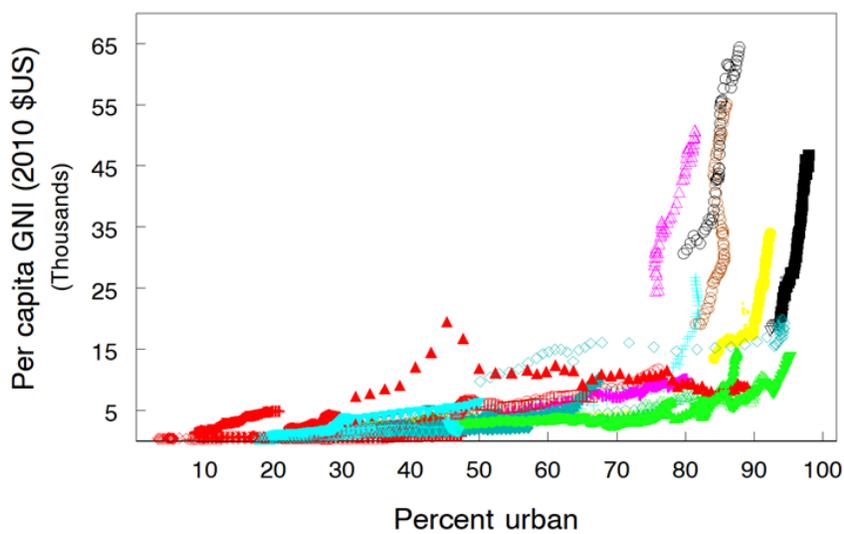
Figure 1. Per capita GNI (standardized to 2010 US Dollars) for countries included in the World Bank's World Development Indicators database grows as national urbanization increases. Symbols indicate individual countries over time. Colors indicate different regions. Red: African countries (Benin, Burundi, DR Congo, Ethiopia, Gabon, Madagascar, Rwanda, South Africa); light blue: Asian countries (India, Republic of Korea, Malaysia, Philippines, Thailand); cyan: Central American and the Caribbean countries (Costa Rica, Dominican Republic, Guatemala, Honduras, Panama, Puerto Rico); green: South American countries (Argentina, Chile, Ecuador, Peru, Uruguay); magenta: North American countries (Canada, Mexico); yellow: Middle Eastern countries (Algeria, Bahrain, Israel); Brown: Australasian countries (Australia); black: European countries (Belgium, Denmark, Malta). Credit: Gad Perry (2020).

Figure 2
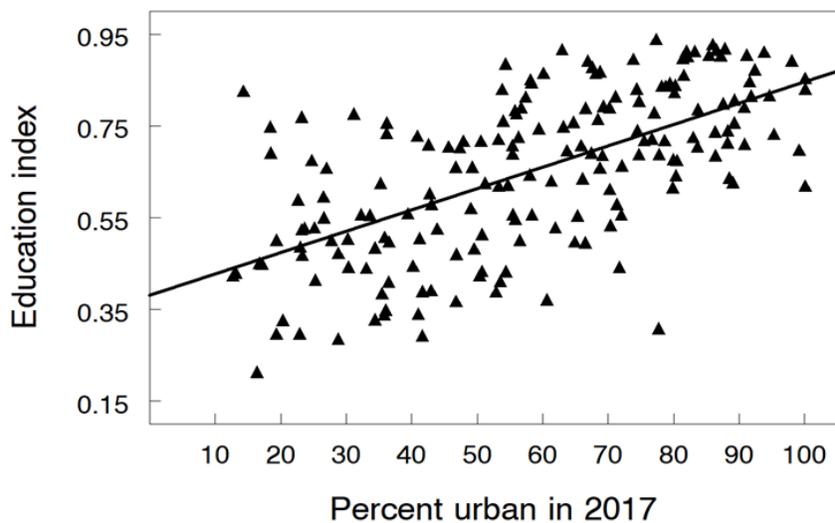
Figure 2. More urbanized countries tend to achieve higher educational outcomes. Data for 184 countries taken from urban and economic data from World Bank.[32] Countries denoted by triangles. Credit: Gad Perry (2020).

Figure 3

Figure 3. Life expectancy is positively impacted by urbanization level in 214 countries (black triangles and trend line) and 33 regions (blue circles). Credit: Gad Perry (2020).[33]

5. Humanitarian assistance. According to the latest summary of recent USAID investments,[34] about 14 percent of 173 projects in forty-three countries, or $2.88 billion in funding, was distributed to projects identified as urban. Urban funding was unrelated to the receiving country's urbanization level or economic output (Rho = 0.057, p = 0.719 for forty-two countries. When GDP was accounted for, r = 0.045, p = 0.783 for thirty-eight countries).

Interviews

Three main insights emerged from the interviews. First, urbanization is proceeding rapidly in two types of countries. In one, the capital city is approaching "megacity" status and is rapidly modernizing; in the other, the capital is by far the largest city, but its population remains under one million. In both types of countries, a slew of much smaller secondary cities exist. In one, these smaller cities attract major immigration from outlying areas, prompted by central government investment in amenities such as higher education institutes. In the other, most secondary cities suffer from inattention and insecurity, but some are being impacted by recent developments in the energy sector. Second, among those interviewed, the general consensus was that U.S. foreign assistance directed towards the urban sector was low (well under 10 percent) in the previous five years and remains low (under 25 percent). They also agree that U.S. foreign assistance investment in urban areas in the next five years should be much higher – about 50 percent, typically. Non-USG interviewees reported similar investment patterns and agreed that the urban sector requires much greater future attention. Third,

there was also a general view that foreign assistance, unless highly concentrated in urban areas, will struggle for impact amidst the vast needs in many capital cities and "megacities," but targeted investment in "secondary cities" has the potential to yield large return on investment.

Survey

We received responses from twenty countries representing all regions where U.S. foreign assistance is administered. One country was represented by two responses, completed by different individuals occasionally providing contrasting answers. Responses from the two countries in which in-person interviews were held were broadly congruent with what we had been told in person.

Only about half of the posts (12/21 responses) sponsor programs they consider urban. The average percentage of administered budget devoted to self-described urban projects was 39 (range: 0-80; standard deviation = 26.5). The lowest values (0-20 percent) were reported by countries in Africa, Asia, the Middle East, and South America; the highest values (75-80 percent) came from Africa and Asia. Only four countries, three of them reporting low past levels of urban spending, stated that current levels of urban spending have increased. Only eleven missions see urban investment as likely to increase in the next five years, compared to eight that expect similar levels and three that were uncertain. Nonetheless, many respondents feel they are engaging, either directly (n = 8) or by encouraging others to act (n = 4).

The biggest urban challenges expected over the next decade included decaying, insufficient, or poorly planned infrastructure (water, sanitation, transportation, etc.; 16 mentions); unemployment/ economic concentration (8); poverty, hunger, and low-income housing shortage (8); population growth and the youth bulge (6); violence (6); migration, particularly to city centers (4); pollution, especially of air or water (4); climate change and resilience (4); health (4); and traffic (3). Respondents saw the most opportunity for near-future projects to tackle economic improvement for urban youth, often through the private sector, and on urban environmental projects. All but three host countries already view urbanization as a major issue. Asked about existing plans to address urban challenges, the most common response (n=9) was that the government (national or municipal) has or is initiating relevant projects, often funding them themselves or with the aid of non-USG funders such as the World Bank, and focusing on capital cities, secondary cities, and the connectivity between them. "Safe cities," "ingenious cities," and similar concepts are being envisioned in multiple countries. Few (n=3) respondents provided details about specific plans to take advantage of urban opportunities.

Urban growth in primary cities appears to be most rapid (n=13) and most concerning (n=11). Responses did not support the often-repeated belief that growth in Africa is primarily internal. The primary source of urban population growth appears to be migration (n=13), but respondents in eight countries, in Africa, Asia, the Middle East, and South America, considered internal growth most important.

Nearly all respondents felt there was room for investment in secondary cities by the local government, U.S. government, and private sector. Almost all (seventeen countries) believe that the private sector is best placed to invest in secondary cities. Missions in three countries felt local governments had the best opportunities, and none identified the USG as the ideal source of funding.

A majority of respondents felt they did not have access to sufficient, reliable data on urban trends. Only six felt able to make informed decisions. Most missions get their urban information from the host government or organizations that rely on host government data such as the UN (6 responses), World Bank (5), or internet sources (5).

Discussion

Both opportunities and challenges of urbanization are more likely to emerge in developing countries, where urban planning has often not been effective.[35] Urbanization is currently fastest-growing in regions notorious for poor capacity to govern.[36] Corruption, weak rule of law, and related problems decrease quality of life and increase the risk of violence and criminality. Foreign assistance often attempts to address this by encouraging open, transparent, and accountable governance. Since countries with higher urbanization rates show significantly better DRG scores (Figure 1), providing foreign assistance in support of urbanization might enhance opportunities for DRG reform. Strengthening existing institutions and infrastructure in urban settings may also allow aid and relief agencies to more effectively respond to future humanitarian needs.[37]

Urbanization appears to be a required, though not sufficient condition for improved economic activity (Figure 2) and improved standard of living.[38] Despite this, most attention in the literature appears to have been focused on undesired outcomes such as pollution.[39] Urban and regional planning that takes multiple considerations under advisement can help prevent or alleviate many of the problems identified in our literature survey and enable cities to serve as engines for national economic growth. Many cities in developing countries are growing at a time of rapid technological change, increasingly doing so in countries that are

lower in the socioeconomic cycle.[40] This enables incorporation of new technologies such as cellular communication, avoiding some of the costs or problems associated with older technologies such as landlines. Cities that are designed with urban biodiversity in mind contain "green infrastructure," which also offers green space conducive to human well-being.[41] Many cities are vulnerable to climate risks, leading the 2019 Worldwide Threat Assessment of the U.S. Intelligence Community to predict "Extreme weather events … will particularly affect urban coastal areas." Encouragingly, relatively simple interventions such as increasing greenery and improved health education can enhance urban health[42] while supporting other desirable endpoints. Thus, creating green spaces as part of a developing world urban improvement project would improve human physical and psychic health, have positive biodiversity impacts, and reduce climate impacts.

Many services can more efficiently be delivered in urban environments. For example, urbanization appears to allow higher educational attainment (Figure 3). This is consistent with the findings of Montgomery et al.[43] who documented better educational outcomes for urban children and adults compared to rural ones and better outcomes in large cities than in smaller ones. The enhanced educational opportunities and health outcomes provided by cities also support economic growth and stability and create educated populations more open to ideas of DRG and gender equality.[44] Importantly, ideas emerging from and tested in major cities can disseminate to other locations when inter-urban connectivity is high.[45]

Respondents from U.S. missions report feeling poorly informed about the variety of challenges, needs, and opportunities offered by urban environments in their host country. Since some of their information sources rely on local government data, what they do have may be partial, inaccurate, or out of date. This is not conducive to effective action at the national scale and should be remedied. More important, however, is that missions do not appear to feel empowered or funded to aggressively act in the urban arena. These reports from the missions, some originating with USAID and others with Department of State employees, are fully congruent with an internal assessment conducted by USAID (2019) to evaluate the success of the organization's urban policy. It found "lack of awareness of the policy," that "staff were not required to apply the policy, were rarely advised to do so by agency leaders, and no earmarks or other dedicated funding were available to implement the policy," and that "a perceived institutional bias for rural development … was frequently cited … as a major obstacle to … USAID's efforts to address urbanization and sustainable urban service delivery."[46]

In a world that is increasingly urbanized, and where needs and opportunities are both increasingly concentrated in urban settings, foreign assistance efforts should have a strong urban focus. Of course, cities rely on food grown in rural

settings, where poverty is still far too common. Yet both the literature we reviewed and the additional analyses, interviews, and surveys we conducted suggest that foreign assistance in the United States and elsewhere has a strong bias against city dwellers. For example, in 2010, the United Kingdom's Department for International Development (DFID) had no funds explicitly devoted to urban projects within its budget of over £1,933 million.[47] As reviewed by International Housing Coalition,[48] urban projects can be complex and often suffer from unclear leadership within the implementing countries, partially explaining the apparent bias. However, historical patterns related to how foreign assistance emerged in which parts of the world exhibited the greatest needs at the time might also be important. Nonetheless, fund allocation needs to shift to better confront an urbanizing world,[49] and complex urban-peri-urban-rural interactions. A full analysis of what is needed, what is already being done and by whom, and how donors can work together to reach these goals is, unfortunately, both needed and outside the scope of the current work.

Implications for science diplomacy

As the Center for Strategic and International Studies (2020) recently noted, "the United States will need to gradually shift its gaze from the Sahel to Sao Paulo and from the Hindu Kush to Kinshasa to promote economic prosperity, secure lives and livelihoods, and revitalize democracy across the globe."[50] The present paper is the result of a need identified within the U.S. Department of State based on similar insights. Our goal was to evaluate whether urbanization is receiving sufficient attention in the arena of foreign assistance and whether a change of policy needs to be considered.

Science diplomacy brings scientific insights and methodologies to diplomatic issues and, conversely, has diplomats helping scientists identify socially relevant issues that can benefit from scientific attention. Ideally, the work is done collaboratively all stages, starting with the conception, going on to the design and analysis, and ending in jointly drawing conclusions. This paper, which resulted from just such a collaboration, demonstrates that urbanization is a growing process directly relevant to foreign assistance, whether by the U.S. government or agencies, or other governments, such as GIZ (Germany) or DFID (United Kingdom). For example, especially as COVID-19 affects the world in dramatic ways, starting with metropolitan areas, urban health issues, including those like urban diets unrelated to COVID-19, should receive attention if U.S. foreign assistance related to health is enhanced.[51] Urbanization also has other implications for international security.[52]

Urbanization presents both challenges that need funding and opportunities that promise great return on investment. At the same time, there is a perception that those on the front lines lack information and tools to address what they often see as a growing but poorly addressed issue. We therefore recommend that both practitioners and policymakers pay more attention to urbanization, developing policy that explicitly recognizes its importance and identifies financial resources to be directed at urban issues that are commensurate with their growing importance, and developing toolkits that can help both inform and empower implementers. Doing this will require close collaboration between diplomacy (identifying needs and constraints) and science (offering solutions consistent with current knowledge). In addition, current processes do not allow allocation to urban areas to be distinguished from other U.S. and other foreign assistance. Establishment of clear identifiers could allow future researchers to more clearly assess both levels and effectiveness of investment in various types of urban settings.

Adopted by all UN Member States in 2015, the 2030 Agenda for Sustainable Development is "a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere."[53] Of the seventeen Goals adopted by Member States, only one, Goal 11, is explicitly urban. It reads "Make cities inclusive, safe, resilient and sustainable." It reminds us that "hunger and fatalities could rise significantly in urban areas, without measures to ensure that poor and vulnerable residents have access to food."[54] It also reminds us that in the world's greatest current health emergency, COVID-19, urban areas "are on the front line of coping with the pandemic and its lasting impacts." As urbanization continues, cities become ever more central to the goals of both those funding foreign assistance and those receiving it. Urban areas require more attention now and into the future. **SD**

Acknowledgments

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any agency of the U.S. Government. Assumptions made within the analysis are not reflection of the position of any U.S. Government entity.

Endnotes

1. Gad Perry, "Urbanization: Scoping the Challenges and Opportunities for Foreign Assistance," (2020), https://www.state.gov/wp-content/uploads/2020/04/Adapting-U.S.-Foreign-Assistance-for-a-Rapidly-Urbanizing-World-1-508.pdf. Appendices available online at https://www.state.gov/wp-content/uploads/2020/04/Adapting-U.S.-Foreign-Assistance-for-a-Rapidly-Urbanizing-World_Appendices-508.pdf.

2. Demographia, *Demographia World Urban Areas (Built-Up Urban Areas or Urban Agglomerations),* 15th Annual Edition (April 2019), http://www.demographia.com/db-worldua.pdf

3. Perry, "Urbanization;" Gretchen De Silva, Chris Upchurch, and Gad Perry, "In COVID's Wake: How to Revive Urban Mass Transit," *Wilson Center New Security Beat* (2020), https://www.newsecuritybeat.org/2020/09/covids-wake-revive-urban-mass-transit/

4. Brandon Fuller and Paul Romer, "Urbanization as opportunity," *World Bank Policy Research Working Paper*, no. 6874 (2016); Peilei Fan, Zutao Ouyang, Dinh D. Nguyen, Thi T.H. Nguyen, Hogeun Park, and Jiquan Chen, "Urbanization, Economic Development, Environmental and Social Changes in Transitional Economies: Vietnam after Doimoi," *Landscape and Urban Planning* 187, (2019): 145-155.

5. United Nations Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects 2018: Highlights* (ST/ESA/SER.A/421) (2019), https://population.un.org/wup/Publications/Files/WUP2018-Highlights.pdf.

6. USAID, *Assessment of the Implementation of USAID's Urban Policy* (2019), https://urban-links.org/assessment-of-the-implementation-of-usaids-urban-policy/; Robert Muggah and Adriana E. Abdenur,"Refugees and the City: The Twenty-first-century Front Line," *World Refugee Council Research Paper,* no. 2 (2018), https://www.cigionline.org/sites/default/files/documents/WRC%20Research%20Paper%20no.2.pdf

7. Available at https://2009-2017.state.gov/f/releases/other/255986.htm

8. World Development Indicators, http://wdi.worldbank.org/

9. National Intelligence Council, Global Trends: Paradox of Progress (2017), https://www.dni.gov/files/documents/nic/GT-Full-Report.pdf; Franklin Obeng-Odoom, "Urban Governance in Africa Today: Reframing, Experiences, and Lessons," *Growth and Change* 48 (2017): 4-21.

10. John Bauer, Wang Feng, Nancy E. Riley, and Zhao Xiaohua, "Gender Inequality in Urban China: Education and Employment," *Modern China* 18 (3) (1992): 333-370; Alice Evans, "How Cities Erode Gender Inequality: A New Theory and Evidence from Cambodia," *Gender & Society* (2019), https://doi.org/10.1177/0891243219865510.

11. Institute for Economics and Peace, *Global Peace Index 2019: Measuring Peace in a Complex World* (2019), http://visionofhumanity.org/reports/

12. Edward B. Glaeser and Bryce M. Steinberg, "Transforming Cities: Does Urbanization Promote Democratic Change?" *National Bureau for Economic Research*, Working Paper 22860 (2016), http://www.nber.org/papers/w22860.

13. Gayl D. Ness and Prem P. Talwar, *Asian Urbanization in the New Millennium*, (Singapore: Marshall Cavendish International 2005).

14. David J. Nowak and Eric J. Greenfield, "Declining Urban and Community Tree Cover in the United States," *Urban Forestry & Urban Greening* 32 (2018): 32-55; Yared Girma, Heyaw Terefe and Stephan Pauleit," Urban Green Spaces Use and Management in Rapidly Urbanizing Countries: The Case of Emerging Towns of Oromia Special Zone Surrounding Finfinne, Ethiopia," *Urban Forestry & Urban Greening* 43 (2019): 126357; and Brian Czech,"Urbanization as a Threat to Biodiversity: Trophic Theory, Economic Geography, and Implications for Conservation Land Acquisition," in *Policies for Managing Urban Growth and Landscape Change: A Key to Conservation in the 21st Century*, ed. David N. Bengston, (St. Paul, MN: US Department of Agriculture, Forest Service, North Central Research Station, 2005), 8-13.

15. Daniel Moran Keiichiro Kanemoto, Magnus Jiborn, Richard Wood, Johannes Többen and Kareb C. Seto, "Carbon Footprints of 13,000 Cities," *Environmental Research Letters* 13 (6) (2018): 064041.

16. Mingxing Chen, Hua Zhang, Weidong Liu, and Wenzhong Zhang, "The Global Pattern of Urbanization and Economic Growth: Evidence from the Last Three Decades," *PLoS ONE* 9 (8) (2014): e103799, doi:10.1371/journal.pone.0103799;

Ivan Turok, "Linking Urbanization and Development in Africa's Economic Revival," in *Africa's Urban Revolution*, eds. Susan Parnell and Edgar Pieterse, (London: Zed Books, 2014), 60-81.

17. Somik V. Lall, J. Vernon Henderson, and Anthony J. Venables, *Africa's Cities: Opening Doors to the World*, (The World Bank, 2017); Anthony G. Bigio, "Phnom Penh, An Unsustainable Capital City," in *Capital Cities and Urban Sustainability,* ed. Robert Orttung, (Routledge, 2019), 154-176.

18. Mark R. Montgomery, Richard Stren, Barney Cohen, and Holly E. Reed, *Cities Transformed: Demographic Change and its Implications in the Developing World*, (National Research Council: National Academies Press, 2003).

19. Mark Cohen, *Health and the Rise of Civilization*, (Yale University Press, 1989), http://www.jstor.org/stable/j.ctt32bpjj; Catalina Torres, Vladimir Canudas-Romo, and Jim Oeppen, "The Contribution of Urbanization to Changes in Life Expectancy in Scotland, 1861–1910," *Population Studies* (2019), doi: 10.1080/00324728.2018.1549746.

20. B.T. Williams, "Assessing the Health Impact of Urbanization," *World Health Statistics Quarterly* 43 (3) (1990): 145-152.

21. Montgomery et al., *Cities Transformed: Demographic Change and its Implications*, 277-279.

22. Frank J. Kelly and Julia C. Fussell, "Air Pollution and Public Health: Emerging Hazards and Improved Understanding of Risk," *Environmental Geochemistry and Health* 37 (4) (2015): 631-649; L. Lebreton, B. Slat, F. Ferrari, B. Sainte-Rose, J. Aitken, R. Marthouse, S. Hajbane, S. Cunsolo, A. Schwarz, A. Levivier, and K. Noble, "Evidence that the Great Pacific Garbage Patch is Rapidly Accumulating Plastic," *Scientific Reports* 8 (1) (2018): 4666; M. Martínez-Bravo and J. Martínez-del-Río, "Urban Pollution and Emission Reduction,"in *Sustainable Cities and Communities. Encyclopedia of the UN Sustainable Development Goals*, eds. Walter Leal Filho, Anabela Azul, Luciana Brandli, Pinar Özuyar, and Tony Wall, (Springer, 2020), doi: https://doi.org/10.1007/978-3-319-71061-7_30-1.

23. Melinda Moore, Philip Gould, and Barbara S. Keary, "Global Urbanization and Impact on Health," *International Journal of Hygiene and Environmental Health* 206 (4-5) (2003): 269-278.

24. Montgomery et al, *Cities Transformed: Demographic Change and its Implication*s, 297; Jia Miao and Xiaogang Wu, "Urbanization, Socioeconomic Status and Health Disparity in China," *Health & Place* 42 (2016): 87-95.

25. Gad Perry and Gretchen De Silva, "Urbanization in the Age of Pandemic," *Wilson Center New Security Beat* (2020), https://www.newsecuritybeat.org/2020/05/urbanization-age-pandemic.

26. Torres et al, "The Contribution of Urbanization;" Tony Champion and Graeme Hugo, "Introduction: Moving Beyond the Urban-R Dichotomy," in *New Forms of Urbanization: Beyond the Urban-Rural Dichotomy*, eds. Tony Champion and Graeme Hugo (Ashgate, 2004), 3-24.

27. Diane Archer and David Dodman, "The Urbanization of Humanitarian Crises," *Environment & Urbanization* 29 (2) (2017): 339–348; Robert Muggah and Adriana E. Abdenur,"Refugees and the City: The Twenty-first-century Front Line," *World Refugee Council Research Paper*, no. 2 (2018), https://www.cigionline.org/sites/default/files/documents/WRC%20 Research%20Paper%20no.2.pdf; Mediel Hove, Emmaculate T. Ngwerume, and Cyprian Muchemwa, "The Urban Crisis in Sub-Saharan Africa: A Threat to Human Security and Sustainable Development," *Stability* 2(1) (2013): 1-14; Institute for Economics and Peace, *Global Peace Index 2019: Measuring Peace in a Complex World* (2019), http://visionofhumanity. org/reports/

28. World Bank, *Violence in the City: Understanding and Supporting Community Responses to Urban Violence* (Washington, DC: World Bank, 2010), http://documents.worldbank.org/curated/en/524341468331181450/pdf/638880WP0Viole00BOX 361532B00public0.pdf

29. Mediel Hove, Emmaculate T. Ngwerume, and Cyprian Muchemwa, "The Urban Crisis in Sub-Saharan Africa: A Threat to Human Security and Sustainable Development," *Stability* 2(1) (2013): 1-14; Institute for Economics and Peace, *Global Peace Index 2019: Measuring Peace in a Complex World* (2019), http://visionofhumanity.org/reports/; Willem Oosterveld, Reinier Bergema, Rianne Siebenga, and Bernhard Schneider, *How Cities and States Can Cooperate to Combat the Violence Nexus and Promote Human Security* (The Hague Center for Strategic Studies, 2018), https://hcss.nl/sites/default/files/ files/reports/HCSS_Resilient-Cities-Safe-Societies.pdf

30. Tomas Zeman, Jan Břeň, and Rudolf Urban, "Role of Internet in Lone Wolf Terrorism," *Journal of Security & Sustainability Issues* 7(2) (2017), https://doi.org/10.9770/jssi.2017.7.2(1); Ariel V. Lieberman, "Terrorism, the Internet, and Propaganda: A Deadly Combination," *Journal of National Security Law & Policy* 9 (2017): 95-124.

31. Zeman et al, "Role of Internet"; Perry, "Urbanization."

32. Database: World Development Indicators (urbanization level) and UNDP Education Index, http://hdr.undp.org/en/data#

33. Data from the World Bank's World Development Indicators database, https://data.worldbank.org/indicator/SP.DYN. LE00.IN

34. Perry, "Urbanization."

35. Harini Nagendra, Xuemei Bai, Eduardo Brondizio, and Shuaib Lwasa, "The Urban South and the Predicament of Global Sustainability," *Nature Sustainability* 1 (2018): 341-349.

36. Fuller and Romer, "Urbanization as Opportunity."

37. Josef Leitmann, "Cities and Calamities: Learning from Post-disaster Response in Indonesia," *Journal of Urban Health* 84 (2007): 144-153; Sachin Modgil, Rohit K.Singh, and Cyril Foropon, "Quality Management in Humanitarian Operations and Disaster Relief Management: A Review and Future Research Directions," *Annals of Operations Research* (2020): 1-54, doi:

https://doi.org/10.1007/s10479-020-03695-5; Caitlin Welsh, "Urban Hunger, New Solutions," December 8, 2020, https://www.csis.org/analysis/experts-react-urban-legends.

38. Peilei Fan, Zutao Ouyang, Dinh D. Nguyen, Thi T.H. Nguyen, Hogeun Park, and Jiquan Chen, "Urbanization, Economic Development, Environmental and Social Changes in Transitional Economies: Vietnam after Doimoi," *Landscape and Urban Planning* 187, (2019): 145-155; International Housing Coalition,*The Challenge of an Urban World: An Opportunity for U.S. Foreign Assistance* (Washington, D.C.: IHC, no date), http://ihcglobal.org/wp-content/uploads/2017/06/The_ Challenge_of_an_Urban_World.pdf.

39. Longwu Liang, Zhenbo Wang, and Jiaxin Li, "The Effect of Urbanization on Environmental Pollution in Rapidly Developing Urban Agglomerations," *Journal of Cleaner Production* 237 (2019): 117649, doi: doi.org/10.1016/j. jclepro.2019.117649

40. Perry, "Urbanization."

41. Brian Stone Jr., *The City and the Coming Climate: Climate Change in the Places We Live* (Cambridge University Press, 2012); Abigail D. Lewis, Mark J. Bouman, Alexis Winter, Erika Hasle, Douglas Stotz, Mark K. Johnston, Karen Klinger, Amy Rosenthal, and Craig Czarnecki, "Does Nature Need Cities? Pollinators Reveal a Role for Cities in Wildlife Conservation," *Frontiers in Ecology and Evolution* 7 (2019): 220.

42. Nadja Kabisch, Lucia Alonso, Payam Dadvand, Matilda van den Bosch, "Urban Natural Environments and Motor Development in Early Life," *Environmental Research* 179 (2019): 108774; Alhaji A. Aliyu and Lawal Amadu, "Urbanization, Cities, and Health: The Challenges to Nigeria–A Review," *Annals of African Medicine* 16 (2017): 149-158.

43. Montgomery et al, *Cities Transformed: Demographic Change and its Implications*, 161-163.

44. Abdul Abdullah, Hristos Doucouliagos, and Elizabeth Manning, "Does Education Reduce Income Inequality? A Meta-regression Analysis," *Journal of Economic Surveys* 29(2) (2015): 301-316.

45. Cynthia Rosenzweig, William D. Solecki, Patricia Romero-Lankao, Shagun Mehrotra, Shobhakar Dhakal, and Somayya A. Ibrahim (eds), *Climate Change and Cities: Second Assessment Report of the Urban Climate Change Research Network* (Cambridge University Press, 2018); Robert Orttung (ed.) *Capital Cities and Urban Sustainability* (Routledge, 2019).

46. USAID, *Assessment of the Implementation of USAID's Urban Policy.*

47. Richard Stren, "Urban Service Delivery in Africa and the Role of International Assistance," *Development Policy Review* 32 (2014): s19-s37.

48. Lewis et al, "Does Nature Need Cities?"

49. Ibid.

50. Center for Strategic and International Studies, "Experts React: Urban Legends," December 8, 2020, https://www.csis. org/analysis/experts-react-urban-legends.

51. Liang, "The Effect of Urbanization on Environmental Pollution."

52. De Silva et al, "In COVID's Wake;" Archer and Dodman, "The Urbanization of Humanitarian Crises;" Gad Perry, Melinda Laituri, and Laura Cline, "Why Secondary Cities Deserve More Attention," *Wilson Center New Security Beat* (2020), https://www.newsecuritybeat.org/2020/10/secondary-cities-deserve-attention/

53. United Nations (UN), *The Sustainable Development Agenda*, https://www.un.org/sustainabledevelopment/ development-agenda/

54. UN, "Goal 11: Make cities inclusive, safe, resilient and sustainable," *Sustainable Development Goals,* https://www. un.org/sustainabledevelopment/cities/