



DOSSIER
AGEING, TERRITORY, AND
ENVIRONMENT

Editors

Patrícia Samora and Alejandro Perez

Conflict of interest

There is no conflict of interest.

Support

Fundação de Amparo à Pesquisa do Espírito Santo (FAPES, Espírito Santo Research and Innovation Support Foundation), Doctoral Scholarship, FAPES Call for Proposals 14/2023.

Received

May 20, 2024

Final Version

Nov 11, 2024

Approved

Feb 18, 2025

The integration of climate planning into the Age-Friendly Cities agenda in Latin America: a necessary debate

A integração do planejamento climático à agenda de Cidades Amigas do Idoso na América Latina: um debate necessário

Renata Cerqueira do Nascimento Salvalaio¹ , Fabrícia Delfino Rembiski¹ , Cristina Engel de Alvarez¹ 

¹ Universidade Federal do Espírito Santo, Departamento de Arquitetura e Urbanismo, Programa de Pós-Graduação em Arquitetura e Urbanismo. Vitória, ES, Brasil. Correspondence to/Correspondência para: R. C. N. Salvalaio. E-mail: renata.salvalaio@ufes.br

Article based on the thesis of R. C. N. Salvalaio, entitled "Cidade 60+: Metodologia de Diagnóstico de Vulnerabilidade Climática para Idosos nas Cidades". Universidade Federal do Espírito Santo, 2025.

How to cite this article/Como citar este artigo: Salvalaio, R. C. N.; Rembiski, F. D.; Alvarez, C. E. The integration of climate planning into the Age-Friendly Cities agenda in Latin America: a necessary debate. *Oculum Ensaios*, v. 22, e2512980, 2025. <https://doi.org/10.24220/2318-0919v22e2025a12980en>

Abstract

These two events can be currently observed in cities whose impacts challenge old urban planning paradigms: climate change and population aging. When analyzing these two competing trends, the question arises as to how cities have been adapting to climate change scenarios within an inclusive agenda for the elderly, considered one of the most vulnerable groups to these events. This article explores the intersection between agendas aimed at active aging and climate planning in nine Latin American cities, through the analysis of their official documents aimed at both themes. As a result, there is an evident lack of integration between the two agendas, on the one hand characterized by a gap regarding the inclusion of the specific needs of elderly people in the preparation stage of climate action plans, and on the other, a lack of concern about including aspects related to reducing the vulnerability of elderly people to climate change in Age-Friendly Cities Programs. The results can contribute to highlighting the importance of planning climate actions that allow vulnerable groups to develop capabilities to face extreme events. This work highlights the importance of linking local age-friendly initiatives to climate action planning practices, with a focus on adaptation measures.

Keywords: Active aging. Population-ageing. Climate action plan. Climate vulnerability.

Resumo

Observa-se recentemente nas cidades dois fenômenos cujos impactos desafiam antigos paradigmas de planejamento urbano: as mudanças climáticas e o envelhecimento populacional. Ao analisar essas duas tendências concorrentes, questiona-se como as cidades vêm se adaptando aos cenários de mudanças climáticas dentro de uma agenda inclusiva aos idosos, considerados um dos grupos mais vulneráveis a esses eventos. Este artigo explora a interseção entre as agendas direcionadas ao envelhecimento ativo e o planejamento climático em nove cidades latino-americanas, por meio da análise de seus documentos oficiais direcionados às duas temáticas.

Como resultado, verifica-se uma evidente falta de integração entre as duas agendas, caracterizada, por um lado, por uma lacuna no que se refere à inserção das necessidades específicas de idosos na etapa de elaboração dos planos de ação climática e, por outro, por uma ausência de preocupação em considerar a necessidade de diminuição da vulnerabilidade de idosos em relação às mudanças climáticas nos Programas de Cidades Amigas do Idoso. Os resultados podem contribuir para evidenciar a importância do planejamento de ações climáticas que permitam que grupos vulneráveis desenvolvam capacidades para enfrentar eventos extremos. Este trabalho destaca a importância de vincular iniciativas locais amigas do idoso às práticas de planejamento relacionada ao enfrentamento das consequências das mudanças climáticas, com enfoque nas medidas de adaptação.

Palavras-chave: Envelhecimento ativo. Envelhecimento populacional. Plano de ação climática. Vulnerabilidade climática.

Introduction

Population aging is emerging as an unprecedented and enduring global phenomenon directly affecting urban environments. Demographic aging, understood as the result of successful development processes in the last century, is a converging trend with urbanization, bringing implications for urban life and challenges for its management. For both developed and developing countries, the population aging process intensifies primarily due to increased life expectancy, declining fertility rates, and technological advancements (Cicarini; Avelar, 2022). The United Nations (UN) estimates that the world population will grow to 9.7 billion people by 2050, with 32% of this population comprising older adults aged 60 years and older (United Nations, 2019).

Similarly, the *Centro Internacional de Longevidade Brasil* (ILC, International Longevity Centre) states that the mid-21st century will mark a demographic turning point, when the number of people aged 60 or older will surpass those under 15 years old, and 64 countries will reach the threshold where 30% of their populations are classified as elderly. Most countries on this list will be developed nations, but it will also include much of Latin America and large parts of Asia, including China (International Longevity Centre Brazil, 2015). According to the Economic Commission for Latin America and the Caribbean (ECLAC), in half a century, Latin America and the Caribbean have experienced a growth in the elderly population similar to that recorded in Europe over two centuries. Some developing countries, such as Uruguay, already have more than 20% elderly citizens (Economic Commission for Latin America and the Caribbean, 2022), and the impact of this transition is felt across various sectors due to the urgent demands this group presents.

Given this reality, cities worldwide have committed to establishing and implementing community programs and practices that are “age-friendly” (Krawchenko et al., 2023), capable of helping older adults remain more active and healthier as they age. The Age-Friendly Communities agenda is one such policy response, with its reach perceived globally. With the aim of assisting and encouraging cities during this process and considering aging as an integral part of urban planning, the World Health Organization (WHO) initiated a global collaborative project in 2005 to identify the main characteristics of an “age-friendly” city. The WHO’s initiative, which culminated in the publication of the *Global Age-Friendly Cities Guide*, is based on promoting active aging by optimizing opportunities for health, participation, and security to improve quality of life in old age. The guidelines established by the Guide have driven the age-friendly cities agenda in various countries, serving as a basis for creating local strategies that describe how they can become more suitable for aging through policies, programs, or urban planning.

Coinciding with this demographic shift, the planet’s climate is in transition, and extreme weather events are increasing in intensity and frequency, bringing growing challenges to human

health and safety, quality of life, and also to national economies. The series of assessment reports by the Intergovernmental Panel on Climate Change (IPCC) provides undeniable evidence of the anthropogenic force driving the observed 1 °C warming of the Earth's surface over the last 150 years. The consequences of this warming have already manifested in various other global-scale changes, such as sea level rise, melting glaciers, shifts in precipitation patterns, and the amplification of extreme events. The severity of these future impacts will largely depend on actions taken to reduce greenhouse gases (GHG) emissions and adapt to ongoing transformations.

Just as population aging, climate change imposes new challenges on cities, which play a central role in the discussion of their impacts, risks, and hazards, both because they are strongly affected by these changes and because they contribute to the intensification of this process. When analyzing these two converging trends, climate change and population aging, the following question arises: Are cities incorporating these two phenomena into their strategic agendas?

This questioning further unfolds into other inquiries: How do these agendas interact? How are older adults involved in the conception and regulation of urban environments and policies related to planning for climate phenomena? Is there any alternative to make this happen?

The rationale for proposing this work is thus based on the hypothesis that, despite the existence of initiatives aimed at developing more age-friendly cities, there is a gap concerning the inclusion of climate issues in the analytical dimensions and, consequently, in providing evaluation parameters for urban communities to include the demands of this age group in public urban planning policies. Conversely, it is believed that climate action plans, even when addressing equity and equality issues, fail to translate these guidelines into actions directed at the needs of groups with different vulnerabilities. Ensuring quality of life for an aging population is already a challenge at multiple levels, but it becomes even more complex when environmental impacts resulting from climate change are considered.

This article initially presents a discussion on the factors that make the elderly population more vulnerable to the effects of climate change, as well as data on population aging and the construction of the Age-Friendly Cities agenda. Next, it emphasizes how the impacts of climate change on older adults are addressed within the framework of Age-Friendly Cities and the Climate Action Plans (CAPs) of Latin American cities that are part of the WHO Global Network of Age-Friendly Cities and Communities. As a result, based on the analysis of selected bibliographic and documentary references, recommendations were drawn up regarding the interaction between population aging and the demands arising from this group's vulnerability to climate change.

Method

To develop the research, an initial literature review and theoretical deepening of the main topics were conducted, aiming to establish fundamental concepts and underpin the documentary analysis. Subsequently, the adopted methodological approach sought to answer the research questions by cross-referencing the list of Latin American cities that are members of the WHO Global Network of Age-Friendly Cities, available on the official website of the Pan American Health Organization (PAHO)², with the list of cities belonging to two recognized transnational networks engaged in confronting the climate crisis: the International Council for Local Environmental Initiatives (ICLEI) Network and C40 Cities, both committed to addressing the impacts of climate change at the local level. These transnational municipal networks, focused on local actions, operate

² Available at: <https://extranet.who.int/agefriendlyworld/who-network/>. Accessed on: May 19, 2024.

collaboratively, informing their members about the impacts of climate change, best practices, and serving as municipal representatives in climate forums (Granberg; Elander, 2007).

The cross-referencing of lists yielded a roster of Latin American cities officially committed to building environments resilient to climate change and suitable for the older population. Subsequently, a search was conducted for the municipal action plans for this population, a requirement for obtaining the WHO Age-Friendly City seal. Climate action plans were then collected, focusing on adaptation and excluding mitigation. In the absence of any specific plan, searches were performed for other public policies in the same area. These searches were primarily conducted through each municipality's official websites, thus identifying how the two themes are addressed by the cities involved, i.e., whether in an isolated manner or if they integrate in some way.

The investigation into the presence of elements indicating a concern with climate change or with sustainability, in general, within the plans/policies aimed at active aging in the selected cities, was carried out primarily by considering the analysis of the following aspects: the axes/domains of action (and their compatibility with the domains established by the WHO); the general and specific objectives (and the presence of issues such as climate justice, equity, or participation in their discourse); and the existence of specific actions and targets for older adults. Furthermore, the study sought to identify how older adults were included in the drafting process of these documents, and whether this process occurred in an inclusive and equitable manner.

Regarding the analysis of climate action plans, the following criteria were defined: (a) whether the plans' objectives/targets address climate justice, equity, or social participation; (b) the existence of a definition within the document's text of who is considered a vulnerable group and whether older adults are included in this group; (c) whether the plan's construction process is participatory and, if so, whether older adults were included; (d) in cases of effective participation, whether the actions reflect the needs of this group.

The cities identified as members of the aforementioned networks are illustrated in Table 1.

Following the search on the official websites of the selected municipalities, it was identified that the cities of Renca and La Plata do not possess a *Plano de Ação para o Envelhecimento Ativo* (PAC, Active Aging Action Plan) and were thus removed from the analyzed sample³. Ibagué, in turn, is included in the Comprehensive Territorial Climate Change Management Plan of Tolima, a metropolitan-level plan that was considered in the analysis. However, similar to Santiago and Buenos Aires, the city does not have an action plan for active aging. Curitiba and Vitacura, being in the 2nd stage of the cycle for obtaining the Age-Friendly City seal, are in the process of developing their plans. Nevertheless, both possess documents presenting the local diagnosis developed for the municipality's plan, which were utilized in the analysis.

Finally, for the analysis of the municipality of Manizales, the Public Policy for Aging and Old Age in Manizales: 2015-2023 was used, as a specific action plan was not identified. Porto Alegre's PAC is currently under development; however, the City Hall makes the Work Plan, which serves as the basis for its development, available online, and it contains sufficient information for analysis. It is important to note that the "Municipal Plan for Older Adults of Porto Alegre" was developed for the period 2016-2018, thus being outdated. Therefore, none of the cities possess a finalized plan that is currently valid for both themes addressed in the article.

³ Despite some bibliographic references indicating the existence of Plan Local de Cambio Climático de Renca (Renca's Local Climate Change Plan) (Mengucci *et al.*, 2019; World Wildlife Fund, 2024), the municipality's official website states that the document is still under development, and the links provided in the references are no longer available.

Table 1 – Table of cities analyzed.

Country	City	Climate action network it belongs to	Year of WHO network adherence
Brasil	Curitiba	C40 and Iclei	2023
	Porto Alegre	Iclei	2020
Chile	Renca	Iclei	2019
	Vitacura	Iclei	2021
	Santiago	C40	2018
Colômbia	Ibagué	Iclei	2016
	Manizales	Iclei	2021
Argentina	Buenos Aires	C40 and Iclei	2017
	La Plata	Iclei	2011

Source: Prepared by the authors (2024).

Why are older adults more vulnerable to climate change?

Climate change is currently characterized as a reality whose need for mitigation measures is undeniable. There is evidence of an increase in extreme weather events in practically every part of the world, and projections indicate that these events will become even more frequent and intense, potentially causing serious harm to health and ecosystems (Salvalaio; Alvarez, 2022). It is important, however, to contribute to its definition. Climate change is understood as long-term alterations in the planet's weather patterns. These changes can be natural, such as through variations in the solar cycle, but it is estimated that since the 1800s, human activities have been the primary driver of climate change, mainly due to the burning of fossil fuels (United Nations, 2022).

Within the scope of monitoring the effects of climate change across the planet, the IPCC is currently the leading political-scientific organization providing the most comprehensive assessments worldwide. Recent reports demonstrate an expansion of content featuring emphatic warnings about the urgency of adopting measures and the need to broaden the scope of climate action.

The latest Assessment Report (AR6) was completed in 2023 and presents the first global stocktake of the world's collective progress towards achieving the long-term goals of the Paris Agreement⁴ (United Nations Framework Convention on Climate Change, 2015). The report found that, with an actual 1.1°C increase in average global surface temperature already underway, the consequences related to changes in the climate system are easily perceptible, representing a rupture from what had been observed for centuries previously.

With each increment in global temperature warming, regional climate changes and extreme events become more widespread and pronounced, albeit unevenly. In recent decades, the frequency and destructive capacity of disasters have increased, regardless of their origin or speed of impact. According to the Economic Commission for Latin America and the Caribbean and the Pan American Health Organization (2021), Latin America and the Caribbean are particularly

⁴ The Paris Agreement is considered one of the most important milestones in climate planning. The document establishes the global goal for adaptation, recognizing that such measures should follow an approach that is gender-responsive, participatory, and transparent, taking into account vulnerable groups and ecosystems, and that the measures should be based on and guided by the best available scientific knowledge (United Nations Framework Convention on Climate Change, 2015).

exposed and vulnerable regions, which jeopardizes food systems and the safe supply of drinking water for communities, generating new conflicts over the control and access to these vital elements. Paradoxically, the increased presence of torrential rains outside regular seasons, affecting unprepared areas and causing significant losses and damage, has turned these phenomena into a structural element that increasingly demands public policies for risk management, in general, and social protection, in particular.

Recent years have been marked by a significant increase in extreme weather events, highlighting the negative effects stemming from the low adaptive capacity of territories. The escalation of these events, the strain on ecological limits, and the more intense and progressive adverse impacts on different populations indicate the need to prioritize this agenda (Brazilian Conference on Climate Change, 2022). This situation not only reveals the urgency of rapid and effective adaptive and mitigating actions but also emphasizes the imperative need to address the unequal impacts on different populations. In this sense, it is important that urban planning integrates an understanding of existing vulnerabilities, from the perspective of the human dimension, considering the vulnerability of individuals (Intergovernmental Panel on Climate Change, 2021). Distinct populations, living in different spaces, exhibit diverse forms of vulnerability, understood in this broader context as the capacity of individuals, groups, and communities to respond to the potential dangers triggered by events related to climate and environmental changes at any stage of the various health-disease processes (Fenner; Lima e Silva; Gurgel, 2009). Among this group of people most susceptible to climatic consequences, are older adults.

Individual vulnerability is discussed in many areas, and there can be discrepancies in its meanings stemming from the different approaches adopted. Frequently, its definition is related to the propensity or predisposition to be harmed, which encompasses a variety of concepts, including sensitivity or susceptibility to damage, or a lack of capacity to cope with and adapt to adverse conditions (Gamble *et al.*, 2013; Rhoades; Gruber; Horton, 2018). Generally, it can be stated that an individual is more vulnerable either because they are more sensitive, more exposed, or less able to adapt. What, then, are the reasons why older adults are considered part of the group most vulnerable to climate change?

First, it is important to clarify that not all older adults are vulnerable, nor do they exhibit the same type of vulnerability to a given exposure. Chronological age alone is not enough to make people more vulnerable to climate risk, but it encompasses a range of physical, political, economic, and social factors that may contribute to it.

Aging implies a reduction in individuals' functional capacity, a higher incidence of diseases, and often a smaller social support network. This reduction makes them not only more vulnerable to the climate event itself but also to suffer more from its consequences, such as limited access to goods and services (Hutton, 2008). The 3rd Report of the Decade of Healthy Ageing (United Nations, 2022), which aims to strengthen the understanding of current and emerging issues with implications for aging (including climate change), presents a framework providing an overview of climate change-derived health risks, their exposure pathways, and vulnerability factors, with an emphasis on older adults (Figure 1).

Several physiological, psychological, and socioeconomic factors contribute to this vulnerability, including the generally high prevalence of certain diseases, medical conditions, and functional limitations among older adults; their increased sensitivity to extreme heat; their growing social isolation; and their financial situation (Gamble *et al.*, 2012).

Regarding health, heatwaves – considered one of the most threatening climate events for older adults (Rhoades; Gruber; Horton, 2018)—have a serious effect on their morbidity and mortality among those with pre-existing cardiovascular diseases, increasing blood pressure and heart rate, which can culminate in cardiovascular mortality (Gostimirovic; Novakovic; Rajkovic, 2020). The thermoregulatory system of older adults is more sensitive, and physiological responses to environmental conditions deteriorate with age. Additionally, some medications interact with thermoregulation, increasing risk of complications and mortality during episodes of extreme heat. In other cases, they are unwilling or unable to employ simple measures, such as opening windows, due to potential costs, environmental noise and pollution, or even fear related to urban violence (Klinenberg, 2015).

In terms of air pollution, the gradual decline of pulmonary function in older adults—which depends on lung elasticity, loss of vital capacity, and forced expiratory volume—increases their susceptibility to respiratory infections and their complications, being a significant cause of hospitalization and death in some countries worldwide (Réquia Júnior; Abreu, 2011; Torres *et al.*, 2020). For those with heart or respiratory problems, fine and ultrafine particles derived from air pollution can aggravate chronic heart and lung diseases and are associated with premature death in individuals of this group (Idani *et al.*, 2019).

Older adults are disproportionately affected by disasters. Elderly individuals may have limited financial resources to help them manage preparation or recovery resources from a natural disaster, and they tend to be more reluctant to evacuate their homes, even temporarily. Such a situation becomes even more concerning when this population lacks an immediate support network in the face of a disaster, in addition to having less access to information about evacuations and shelter (Krawchenko *et al.*, 2016). This was clearly demonstrated in Louisiana (USA), where older adults accounted for 49% of total fatalities after Hurricane Katrina, despite comprising only 6% of the population. This high rate was attributed to evacuation challenges and the invisibility of older adults to emergency services (Walkling; Haworth, 2020). Simultaneously, extreme weather events affect the mental health of older adults. Some older individuals who survived disasters experience high rates of survivor’s guilt, especially when they lose close relatives. They also face high rates of post-traumatic stress and depression after floods and, in the face of disasters, may have increased perceptions of loneliness (Economic Commission for Latin America and the Caribbean, 2022).

Physiological factors contribute to older adults’ increased sensitivity to exposure to climate hazards, enhancing their vulnerability. Other factors, however, contribute to the decrease in their adaptive capacity. In aging, the adaptation process can also be compromised by the inadequacy of urban environments to increasing natural hazards, such as floods or rising sea levels. The place where one lives, along with the physical and social support structure, influences the quality of life of older people. In this sense, environmental gerontology can be instructive for understanding the experiences of vulnerability and resilience of older adults in this context of climate change. This area of research studies the influence of the environment on the aging process, focusing on describing, explaining, and modifying the relationships between older adults and their socio-spatial contexts (Bestetti, 2010). Thus, the attributes of physical and social environments both shape risk and limit risk management, and vulnerability to climate change needs to be considered even more in the adaptations of these environments for this group.

Concurrently, socioeconomic and cultural factors can also increase the vulnerability of older adults by affecting access to basic services, health, education, and social participation (Yang; Lee; Juhola, 2021). Their effects are interactive, as factors affecting adaptive capacity rarely act alone.

Vulnerability can be reduced by adopting appropriate adaptation measures. In this regard, understanding the specific risk factors associated with climate change is of great importance for developing adaptation measures. However, an analytical study on the promotion and protection of the rights of older persons in the context of climate change conducted by the UN in 2021. That study reveals that, despite disproportionately suffering the effects of extreme events caused by climate change, older people are generally excluded from policies and programs designed to address these effects. This can lead to unequal or inadequate treatment, a problem that deepens when considering the intersection of age with other characteristics, such as gender, socioeconomic status, disability, among other issues (United Nations, 2021).

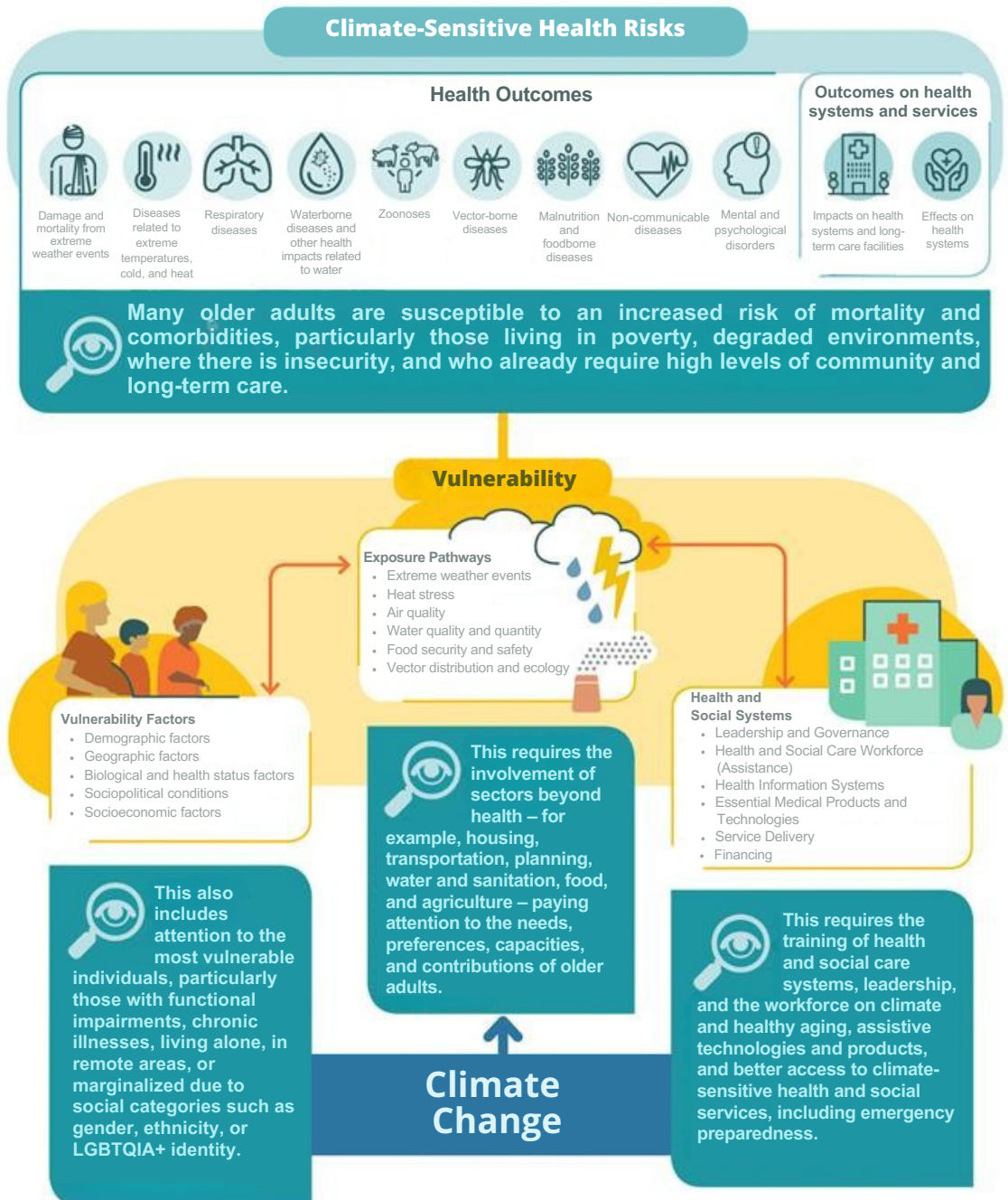


Figure 1 – Overview of climate-related health risks.

Source: World Health Organization (2022), adapted and translated by the authors (2024).

Older Adults and the Need for Cities to Adapt to the New Demographic Reality

For Plouffee and Kalache (2010), the increasing aging of the population, as well as urbanization, represents the pinnacle of successful human development. This phenomenon, however, demands that cities adapt, and as part of this adaptation, communities have been adopting a series of implementing policies to help older adults remain healthy and active. In this sense, the WHO has been a fundamental advocate of this approach. Based on the concept of active aging, the WHO launched the “Global Age-Friendly Cities Guide” in 2007, an initiative to stimulate active aging by optimizing opportunities in the areas of health, participation, and security, thereby increasing the quality of life as people age (Organização Mundial da Saúde, 2007). The WHO document can be considered the most significant and globally adopted model of an age-friendly city to date. In summary, the initiative proposes adapting urban structures and services to make them accessible and inclusive for older people with varying needs and capacities. The use of the Global Guide, however, does not prove that a city is, in fact, a friendly environment adapted to the needs of older people, but rather a declaration of commitment to work for the benefit of this group.

In 2023, the WHO published a second guide, whose objective was to provide guidance to entities involved in the formation and maintenance of age-friendly city programs, as well as to identify national actions capable of supporting local programs that benefit this group (Organização Mundial da Saúde, 2023). This new document maintains the focus of the approach on attitudinal, social, and environmental barriers and challenges that hinder active aging, recognizing eight critical domains of action within cities: (a) outdoor spaces and buildings; (b) transportation; (c) housing; (d) social participation; (e) respect and social inclusion; (f) civic participation and employment; (g) communication and information; and (h) community support and health services (Organização Mundial da Saúde, 2023), with the built environment being covered by the first three domains. The methodology advocated by the new document remained the same as that established by the 2007 Global Guide. However, the text states that these domains should serve only as a starting point for identifying priorities, people, and organizations that should be involved, and can be adapted to better reflect needs and priorities in each context.

Objectively, the Global Guide continues to be considered the primary tool provided by the WHO for each city to self-assess. It uses criteria established in its proposed checklist. Since its launch, the program has expanded, forming the Global Network of Age-Friendly Cities. Recognition as an Age-Friendly City is granted by the WHO through the issuance of a seal to cities that demonstrably encourage active aging, promoting access to health, participation, and safety, providing a good quality of life, and taking into account the heterogeneity of old age. Cities worldwide base their strategies on these guidelines to elaborate on how they intend to create age-friendly communities through local policies. However, the risks associated with climate change and how these may affect them are not yet being considered.

By identifying “Outdoor spaces and buildings” and “Housing” as relevant domains of action, the WHO recognizes that urban space can contribute to a large number of positive health outcomes for older adults. According to the Organization:

[...] it is considered important for older people to live in accommodation that is built from adequate materials and structurally sound; has even surfaces; has an elevator if it is multi-level accommodation; has appropriate bathroom and kitchen facilities; is large enough to move about in; has adequate storage space; has passages and doorways large enough to accommodate a wheelchair; and is appropriately equipped to meet the ambient environmental conditions (Organização Mundial da Saúde, 2007, p. 31).

It is observed that this concept of adequate housing is centered on the idea of accessibility and safety, to the detriment of features that could ensure environmental comfort and, consequently, contribute to reducing individuals' exposure to the effects of climate change. The same occurs when addressing outdoor spaces and their impacts on the mobility, independence, and quality of life of older adults. There are countless attributes of the urban landscape and built environment that have positive effects on the daily lives of older people; however, in the planning of Age-Friendly Cities, there is a clear focus on physical access barriers. The need for smooth, level, and non-slip surfaces; sufficient width to accommodate wheelchairs; and lowered curbs are the desirable characteristics of the outdoor environment described by the WHO (Organização Mundial da Saúde, 2007), reinforcing the exclusive focus on accessibility issues to the detriment of other aspects. This outdated approach in the dimensions of analysis proposed by the Global Guide may result in a gap in the proposition of actions aimed at making environments more suitable for older adults, since the assessment instrument disregards some relevant criteria.

Interaction Between Climate Agendas and Active Aging

The Climate Issue in the Age-Friendly Cities Agenda

Most cities, as could already be anticipated, utilize the framework provided in the WHO Global Age-Friendly Cities Guide for developing their local strategies, as they have joined the Global Network. In some cases, there is a minor variation in nomenclature, but the focus remains the same. Thus, both in the diagnostic phase and in the presentation of plan proposals, the eight domains proposed by the World Health Organization (2007) underpin their entire organization, without any adaptations. The exception is Manizales, Colombia, whose Public Policy for Aging and Old Age makes no allusion to the World Health Organization and its projects. However, the Colombian city's policy was developed in 2015, prior to the municipality's adherence to the global network, which explains why its criteria are absent.

Regarding the allusion to climate issues or sustainability requirements in their discourse, none of the documents make reference to climate or sustainability, even though all cities joined the global network after the topic was already subject to broad international debates, including after the signing of the Paris Agreement by their respective countries.

With regard to social participation in the plan development process, however, there is genuine emphasis on social participation. In Porto Alegre, social participation is listed among the principles underlying the plan's elaboration, alongside social control and cross-sectoral governance. To this end, the municipality emphasizes the importance of participating in the Municipal Council for Older Adults and the Deputy Municipal Secretariat for the Elderly as mechanisms for promoting and protecting rights. It is worth noting that the existence of a Municipal Council for Older Adults in the municipality is a WHO requirement for joining the Global Network. However, its mere creation does not guarantee effective representation of this group in public policy planning and implementation. In Curitiba, the diagnostic phase to provide support for the elaboration of the municipal plan for older adults included an online public consultation and the use of in-person surveys during events and targeted actions, aiming to identify older adults' perceptions regarding the positive and negative aspects of the urban environment. The public consultation is also part of the WHO's requirement for municipalities to receive the Age-Friendly City seal.

Regarding the goals and actions outlined, only the Municipal Plan for Older Adults of Porto Alegre includes actions to be implemented within its scope. Among these listed actions, none makes

reference to adaptation to climate change. Despite this, it is observed that some strategies have the potential to contribute to reducing the vulnerability of older adults, even if not intentionally. An example is the actions within the “Culture, sport, and leisure” axis, such as offering various sports activities which, by promoting an improved quality of life and active aging, can reduce older adults’ heat sensitivity. Educational initiatives, in turn, have the potential to increase this group’s adaptive capacity by providing quality information on the topic, contributing to their knowledge about climate risks and ways to mitigate or cope with them through adaptive changes. Within the housing, urban planning, and accessibility axis, the need for building regulation – which includes improving designs and employing appropriate construction materials – has effects that can help decrease older adults’ exposure to risk.

Climate Action Planning and Identifying Older Adults as a Vulnerable Group

At this stage of the study, the aim was to analyze how local climate adaptation plans have been addressing the demands of different population groups, focusing on older adults.

Climate justice emerges as one of the most discussed issues regarding the goals and targets of the analyzed CAPs, except in Manizales. In the climate planning of Ibagué and Porto Alegre, for example, climate justice and equity are guiding principles for the plans’ goals, targets, and actions. In Buenos Aires, the concern lies in establishing a fairer, more sustainable, and inclusive future for the city’s inhabitants. The same occurs when it comes to including social participation, present in all discourses without exception. However, practice does not always align with discourse. Santiago’s CAP, for instance, although envisioning the promotion of participation for all, makes no mention of a participatory process in its text. In its diagnostic phase, workshops were held with the municipal technical team, council employees, and managers, without participation from community representatives.

Regarding groups considered vulnerable, some plans address only the city’s vulnerability, not that of its people, as is the case with Porto Alegre and Manizales. In both instances, special attention was given to identifying territorial vulnerability as a means of reducing the impacts of its effects and ensuring the continuity of prevention and response actions for natural disasters. However, it is important to highlight that the reduction of local vulnerability has a direct impact on the reduction of social vulnerability, given that contextual factors, including housing and urban location, can increase individuals’ exposure to risk.

The other documents bring different definitions about which groups can be considered vulnerable. Curitiba and Santiago consider vulnerable those who lack actions for their inclusion, without defining who these groups would be. Buenos Aires and Ibagué, in contrast, clearly delineate vulnerable groups, identifying older adults, and in both cases, older adults are considered a group to which special attention should be given. This concern can even be observed in the proposition of actions, where the target audience for each of them is identified.

Regarding participation, the CAPs (Climate Action Plans) of Manizales and Santiago were not developed based on a participatory process, or at least this information is not described in the plans. In the other cases, this concern was present, and the most frequently used tools for this purpose were workshops and focus groups, in an attempt to allow dialogue and participation dynamics to prioritize the population’s needs. In Curitiba’s case, public consultations were also conducted via online forms, because the plan being developed amidst the Covid-19 pandemic.

In other instances, popular participation was introduced into the process through civil society representative organizations, such as in Vitacura, where the consulted institution was the Environmental Committee. It cannot be affirmed, however, whether older adults can be considered effectively represented, given that only the plans of Buenos Aires and Ibagué specifically mention the participation of representatives from this group during the planning process. Perhaps this is why these two cities are the only ones whose CAPs, as previously mentioned, include actions specifically aimed at this group.

Considering the analyses carried out, there is a clear lack of political coherence regarding aging and climate change in cities. First, most of them, despite their commitment to the WHO Global Network for Age-friendly Cities, have not developed a specific action plan, although this is a WHO requirement. Furthermore, adherence to the Age-Friendly Cities program does not necessarily indicate genuine concern for this group, as they are often not even treated as vulnerable in climate planning, despite evidence in various studies. Finally, based on the cities studied, the climate agenda has overshadowed issues related to population aging, perhaps due to its urgency and large-scale impacts. The synthesis of the plan analyses can be found in Tables 2 and 3.

Revisiting the initial question presented in the introduction: Are cities managing to integrate the phenomena of population aging into their strategic agendas? The analysis shows that they are not. Additional studies are needed to broaden the research, but taking the analyzed realities as a reference, it is observed that the integration of the two themes requires more effort and an understanding of climate vulnerability as essential for the implementation of both climate action plans and local strategies for active aging.

Is there, then, an alternative for this integration to happen? The research showed that the issue of population aging has not received the necessary priority, which can be perceived by the absence of specific plans directed at older adults even in cities that have joined the WHO Global Network. Notably, in these cities, the discussion regarding the treatment of older adults as a group most vulnerable to climate change also does not occur, with the exception of Buenos Aires.

One of the most important characteristics for pursuing the integration of agendas is the transversality of policies, even cited in some documents, such as Porto Alegre's Municipal Plan for Older Adults and the work plan for the elaboration of the Climate Action Plan. Transversality allows different sectors of municipal management to address the demands of a specific agenda, so that these are not solely the responsibility of a single body or department. It also enables issues from one specific agenda to be part of proposals related to other agendas.

Cities like Metz, in France (Figure 2), can be considered an example in terms of transversality, having successfully developed tools so that demands arising from population aging in the territory encompassed current issues directed at adaptation to climate change. For this transversality to be effective, a new axis of action was inserted into the "2023-2025 Action Plan: Metz Age-Friendly City" in addition to the 8 domains established by the WHO, which were the basis for previous versions of the plan. Thus, the "Ecological Transition" axis was established, with the objective of "evolving today to prepare for the future." The main goal established for this axis is to contribute to the implementation of the municipality's Climate Plan, according to the guidelines of the city's Department of Ecological Transition. Among the actions to be developed in this domain are the mapping of urban heat islands—and the cross-referencing of this data with the location of more vulnerable older adults. Also, the collection of information on how to deal with heat, such as identifying sources of potable water and shaded parks, so that these can be made available to older people. At the same time, the municipality reinforces the importance of participatory governance

Table 2 – Summary of PAC Analysis.

		Climate Action Plan (PAC)								
Analyzed Topics		National					International			
		Curitiba	Porto Alegre	Renca	Vitacura	Santiago	Buenos Aires	La Plata	Ibague	Manizales
Scale	Municipal	Y	Y		Y	Y	N		N	Y
	Metropolitan	N	N		N	N	Y		Y	N
Objectives	Climate Justice / Equity	Y	Y		Y	Y	Y		Y	N
	Mitigation	Y	Y		Y	Y	Y		Y	Y
	Adaptation	Y	Y		Y	Y	Y		Y	Y
Methodology	Urban Vulnerability Diagnosis	Y	Y		Y	Y	Y		Y	Y
	Population Vulnerability Diagnosis	N	N		Y	N	Y		Y	N
	Participatory Process	Y	Y		Y	N	Y		Y	N
	Definition of Vulnerable Groups	Y	N		Y	N	Y		Y	N
	Idosos forum envolvidos	N	N		N	N	Y		Y	N
Proposals	Specific Actions for Vulnerable Groups	N	N		N	N	Y		Y	N
	Specific Actions for Elderly	N	N		N	N	Y		Y	N
Legend	Y	Yes								
	N	Not specified / Does not have								
		Plan does not exist / Not found								

Source: Prepared by the authors (2024).

Table 3 – Summary of the Analysis of Active Aging Action Plans.

		Action Plan for Active Aging								
Analyzed Topics		National					International			
		Curitiba	Porto Alegre	Renca	Vitacura	Santiago	Buenos Aires	La Plata	Ibague	Manizales
Scale	Municipal	Y	Y		Y					Y
	Metropolitan	N	N		N					N
Objectives	Sustainability / Climate Justice	N	N		N					N
	Addressing Climate Change	N	N		N					N
	Equity / Inclusion	Y	Y		Y					Y
Methodology	Local Diagnosis	Y	Y		Y					Y
	Participatory Process	Y	X		X					Y
Compliance with the AFC framework	Axes Foreseen in the Program	Y	Y		Y					N
	Diversified Axes	N	N		N					Y
Legend	Y	Yes								
	N	Not specified / Does not have								
		Plan does not exist / Not found								

Note: AFC: Age-Friendly Cities.

Source: Prepared by the authors (2024).

to ensure social justice and equity. In this sense, the Council of Older Persons has representation in the Steering Committee of both the action plan for aging and the climate action plan, so that their demands are represented.

Simultaneously, the “Metz: Climate Ambition 2030” plan, focused on climate change mitigation and adaptation, had its development process guided by frequent public consultations and the creation of listening spaces with specific groups, with older adults included in this category. These tools were used at different planning stages, especially during the prioritization of actions. Such measures directly reflect the actions and sub-actions established in the document, by addressing the specific needs of various vulnerable groups.

Examples like Metz demonstrate the importance of developing strategic plans that are aligned with other policies influencing the existing urban space, incorporating citizens’ perceptions on themes that directly impact their daily lives into their construction.



Figure 2 – Overview of Metz, France.

Source: Prepared by the authors (2024).

Final Considerations

The climate crisis and population aging challenge traditional paradigms of public policies. While the municipal level is uniquely positioned to lead both the demographic transition and climate change issues – considering that impacts manifest locally – it is at this level that the greatest challenges arise when developing guidelines to steer both agendas. Through the analysis of the selected documents, the need for additional studies on the vulnerability of older adults and the interaction between vulnerability, resilience, and adaptive responses to projected climate stressors is identified. In light of the projected increase in the older adult population and the fact that a large part of this population is concentrated in regions susceptible to significant impacts of climate change, investigations should identify vulnerabilities and develop strategies to enhance the resilience of older adults and communities should be a priority. In this sense, diversity plays an essential role in building inclusive climate solutions. It is undeniable that prioritizing participatory processes that consider aspects such as gender, race, and age is crucial, as the pursuit of equity intertwines with the fight against other forms of discrimination and social inequality.

The Age-Friendly Agenda holds significant potential for interacting with climate planning, as the built environment is a crucial axis in both programs. However, it is essential that policies related to adaptation and climate change acknowledge the challenges of an aging society. A revision of

the Age-Friendly Cities model is also needed to include, within its scope, issues addressing new contemporary challenges, such as those related to climate change and its effects on the daily lives of older adults, even if integrated transversally within existing domains.

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Contributors

R. C. N. Salvalaio contributed to the Conceptualization, Data Curation, Investigation, Methodology, and Original Draft writing. F. D. Rembiski and C. E. Alvarez contributed to the Formal Analysis, and Review & Editing of the writing.