

Abstract

A consequence of the progress of civilization is the increasing longevity and aging of societies, a rapid process described as the *silver tsunami*, entailing a number of changes to the society, politics and economy. The second half of the 20th century saw a dramatic increase in birth-rate and a decrease in mortality among seniors, which created new issues of adaptation and the use of urban space for the needs of seniors. The global population has been rising steadily since 1961 from 3.073 billion in 1961 to twice as much in 2015 – 7.358 billion. Simultaneously, the number of people aged over 60 has been increasing. The trend has been present in the last few dozen years and will continue. A noticeable trend is the prevalence of females aged 60 and over. In the upcoming decades the following may be expected: an increase in the population aged 60 at a faster rate, the aging of the population in the location of their residence and the need to provide appropriate health care by local governments and meet other needs of seniors.

Local governments are facing a considerable challenge to accurately verifying cities, and in particular the diagnosis of the condition of housing estates in the context of their friendliness to life of elderly people in order to be able to pursue a sustainable pro-elderly policy. The purpose of this policy is to plan and provide appropriate facilities for seniors in a given place. More and more often, seniors are looking for the most comfortable place to live for their elderly. In response to these needs, a universal methodology for identifying age-friendly housing estates (AFHE) in cities in terms of infrastructure and landscape determinants will be developed and tested. The approach proposed is an innovative one in the context of identifying senior-friendly housing estates in cities and visualising this phenomenon in a cartographic form. Such an approach to urban housing estates diagnosis, especially regarding Poland, is not found in the available international academic literature or practical guides. The methodology makes use of tools that allow identifying AFHE and, at the same time, can form the basis for future social and spatial policies of cities.

The methodology will be based on the general, international assumptions of "Aging in place", "Age-friendly city", "Active ageing", as well as in-depth analysis of contemporary trends in this field, using international guidelines and recommendations for active aging policies and policies state and local politics as in the case of survey data from the target international population and information provided by experts. A list of the benchmarks of a friendly infrastructure and landscape in housing estates will be developed and classified. In the additional research assumptions of the developed methodology will use these spatial factors for which spatial information is publicly available to maximally automate the process. The diagnosis of space will be based on a mixed approach: cartographic and field inventory. Cartographic inventory will be based on modeling the landscape and infrastructure using maps and numerical terrain models from Geographic Information Systems (GIS). This is a way to significantly speed up the measurement procedure and acquire data for large areas, often inaccessible during the field inventory. Due to the disadvantage of this approach, the lack of direct contact with the real image and its components, e.g. smell, the methodological test will also have to include a field interview with selected residents of housing estates about the quality of life and assessment of perceptual factors in order to complement the cartographic inventory. The test will be carried out in two capital cities of regions in Poland. The methodology test will present the possibilities of using the free GIS software to develop AFHE thematic maps in the city. This innovative approach to AFHE visualization will expand the knowledge about the possibilities of diagnosing senior citizen-friendly spaces in the city. Developed list of criteria influencing the friendliness of housing estates for senior citizens can be a useful for public entities in creating city and housing planning policies, as well as for private entities to manage their own investment plans and implement the concept of on-site aging in their planning and for real estate agents to explore the real estate market for the needs of elderly clients.

The overall result of the project will be a methodology for diagnosing housing estates in cities, taking into account infrastructural and landscape criteria in terms of their elderly friendliness, including a presentation of the usefulness of GIS tools to create thematic maps visualizing the degree of friendliness.