

Health and Well-Being in Urban Areas: The WHO Healthy Cities Project

LUÍS N. V. SANTOS¹, LÍGIA TORRES SILVA², RUI RODRIGUES RAMOS³, MARGARIDA TORRES⁴

Department of Civil Engineering
University of Minho – Engineering School
Campus de Gualtar – 4710 057 Braga
PORTUGAL

(1) luisantos.geo@gmail.com; (2) lsilva@civil.uminho.pt;
(3) rui.ramos@civil.uminho.pt; (4) dps@cm-viana-castelo.pt;
<http://www.civil.uminho.pt>

Abstract: - The increasing number of people in the city takes the countries and organizations to ask themselves about the direction of urban areas in the provision of quality life and sustainability. The WHO promotes the Healthy Cities project to encourage local planning actions to provide more health and sustainability for cities. Viana do Castelo follows this directive developing a monitoring system that allows reflection on the promotion of the well-being and health care of its citizens.

Key-Words: -Quality life, Healthy Cities, European Healthy Cities Network.

1 Introduction

The constant effort to achieve economic growth drew the attention of human beings to the fragility of natural resources and its limitation. Realizing the limits of the capacity of ecosystems and the need to ensure that future generations will be able to subsist, forwarded Humanity to improve their social and economic development in order to preserve the planet and its resources. The power of the man who has to build and create, contrasts with its ability to destroy and annihilate [1]. The over-exploitation of natural resources has led to problems such as desertification, species extinction, climate change, pollution, soil erosion, over-exploitation of fossil fuels, and others.

Cities support the majority of the population of the world and the perspective is for an increase. A century ago, only 2 out of 10 people in the world lived in cities. By the year 2030, 6 out of 10 people will live in urban areas, and by 2050, 7 out of 10. In 2009, the world urban population was 3.4 billion and in 2050 it is estimated to reach 6.4 billion [2]. It is in the cities where the greatest challenges in achieving sustainable development can be found, but also the welfare and health of the population.

The meaning of health has changed over time, and currently, it is seen as a multidisciplinary and intersectoral matter on several projects and initiatives in different fields. Indisputable, it is argued that access to healthcare is a right that includes any human being.

This article will describe the work done by the World Health Organization (WHO), which aims to encourage the local authorities and organizations in promoting actions linked to population health and sustainable development through the Healthy Cities project (1987).

The purpose of offering to the different countries, cities and communities associated with the project, the possibility of working together to exchange plans, strategies and information, led the WHO to develop the Network of Healthy Cities. At a European level, this network is structured by the European Network of Healthy Cities and the National Networks of Healthy Cities. As a city member of the WHO Healthy Cities project, member of the European Network of Healthy Cities and the Portuguese Network of Healthy Cities, the behavior of Viana do Castelo will be discussed in the construction of its strategic plan to promote health. For this, the set of indicators of WHO will be presented which will serve to monitor an Index of Urban Sustainability in the city, with the aid of sub indicators selected and identified as essential to a closer understanding of the local reality.

2 The WHO Healthy Cities Project

In 1987, the World Health Organization developed the Healthy Cities project to encourage local authorities, organizations and associations to promote initiatives of health and quality of life.

This project was based on the concept of Health for All (HFA), built in 1978 by the Declaration of

Alma-Ata [3], underlining the need for an urgent intervention by local authorities, organizations and communities in health and welfare of the entire population, and the principles of the Ottawa Charter (1986), which emerged as a reinforcement to the guidelines initiated by the Declaration of Alma-Ata, promoting health in industrialized countries and the surrounding regions, defining health promotion not only as a matter solely of the health sector, but also the lifestyles of the population [3].

The Healthy Cities project emerges as a promoter of health and quality of life, based on community participation, intersectoral and multidisciplinary cooperation and building strategies to satisfy the needs of sustainable development. It is a project to be developed in the medium / long term, to bring the various civil agents works in defense of a healthy life for the residents.

It is a process that is not only the physical environment of the city, but also mainly by citizens. Sustainability is applied in the interaction with the city, therefore, more than one concept, it is a process that identifies the constant effort of people to obtain an improvement in the health levels.

As local authorities are those that are closest to the people, they are responsible for stimulating and promoting new health policies. To support the various countries and municipalities deploying actions linked to the Healthy Cities project, the WHO has developed a Network of Healthy Cities, structuring in Europe by the European Network of Healthy Cities and the National Networks of Healthy Cities, stimulating exchange of information and ideas between national and international cities. The European Network applies different phases with a period and a specific theme, to guide the cities and towns in the fulfillment of common goals.

2.1 WHO European Healthy Cities Network

The WHO Healthy Cities project in Europe can be applied by the European Network of Healthy Cities or by the National Network of Healthy Cities. Only 11 cities have joined the project in 1987, enough to attract international recognition. Currently, the European Network of Healthy Cities has about 90 cities and 30 National Networks of Healthy Cities European which in total represent about 1400 cities and towns [3].

Unlike what occurs in the National Networks, cities to join the European Network need to submit an application to WHO, meet requirements and criteria that prove to be ready to reach the objectives released in each phase. The number of cities present in this network is limited by the number of inhabitants of each country, usually a city for every

5 million and a maximum of 12 cities by country. Each city must contribute annual dues, assisting the costs with staff and administrative expenses.

The European Network of Healthy Cities is fundamental in supporting common strategies on health in Europe, approaching the cities to exchange information and experiences in developing and implementing initiatives that promote the quality of life. The WHO [4] identified six key objectives for the European Network:

- Promote policies and actions for health and sustainable development locally and in the WHO European Region, focusing on the determinants of health, poverty and the needs of vulnerable groups;
- Strengthen the position of national Healthy Cities in the context of policies for health development, public health and urban regeneration, with emphasis on local-national cooperation;
- Create policies and practical experience, good evidence and methods that can be used to promote health in all cities of the region;
- Promote solidarity, cooperation and linkages between European cities and networks, making them participate in the Healthy Cities movement;
- Play an active role in health promotion at European and global, through partnerships with other agencies concerned on urban issues and local authority networks;
- Increase the accessibility of the WHO European Network for all Member States of the European Region.

The main objective assigned to the European Network is the construction of concepts and innovative measures helping to overcome barriers for achieving health and sustainable development. As an international recognition for the effort of cities in the work of environmental protection, cultural, and implementation of a healthy and sustainable planning, the United Nations highlight the cities that most work towards implementing these initiatives in the European Network of WHO Healthy Cities with LivCom [3] awards.

2.2 WHO National Healthy Cities Network

Citymembers of the national networks do not pass by the same evaluation and follow the goals set by the WHO for the European Healthy Cities Network. The work of this network is independent, but closely cooperates with the WHO developing ideas and initiatives in health. The cities of National Networks, as the European Network have the opportunity to share knowledge and experiences with each other, strengthening the actions of local authorities, organizations and businesses to achieve

their objectives in the field of health and sustainability. The main objective of the network is to encourage cities to implement the policies of the Health for All and Agenda 21 projects.

Today, Europe has 30 National Networks of WHO Healthy Cities and each is independently selecting its priorities and work, sharing a common effort to achieve goals in health. Usually, it is the European Network of Healthy Cities, who develops a national network, however, there are countries that anticipate and encourage organizations and associations in the structure of their network.

The Portuguese Network of Healthy Cities of the WHO appears in 1997 only with nine members and currently has 29 cities. Like other national networks, the Portuguese Network approaches the cities in the work, collaboration, exchange of ideas and initiatives promoting quality of life and health in the municipalities. The mission of this association is the promotion of the Healthy Cities project and the attraction of new members to its network in the country.

2.3 Phase V (2008-2013) of the WHO Healthy Cities Network in Europe. Goals and Requirements

The Healthy Cities project is worked by the European Network of Healthy Cities through different phases of 5 years. The I Phase (1988-1992) had 35 cities in the European Network, and consisted mainly in structuring new ways to promote health in urban areas. The II Phase (1993-1997) European Network had 39 cities and the objectives of this phase were more active, focusing on public health policies and healthy and sustainable planning. The III Phase (1998-2002) European Network for Healthy Cities involved 55 cities, and focused on encouraging cities to build partnerships for the development of health plans in social, equity, sustainability areas and Agenda 21. The IV Phase (2003-2007) had more than 70 cities in the European Network, and its objectives followed the themes of aging, urban planning, health in cities evaluation and physical activity as a way of life.

At the present time, the European Network of Healthy Cities of the WHO is in the V Phase (2009-2013) and has 94 cities committed to fulfill the main objectives of this phase. With the Declaration of the Zagreb Healthy Cities [5] cities have taken work in health protection and equity in local politics, monitoring all sectors related to health, welfare policies and actions. To implement the goals and selected topics, Phase V is based on conclusions and advice from the Global Commission on Social

Determinants of Health. Cities will introduce measures that promote intersectoral collaboration in health and equity, planning mechanisms to encourage the involvement of society [4].

The municipalities of the network are encouraged to join this phase, to implement strategies and initiatives that influence people in changing behaviors that promote their welfare. An evaluation of the levels of health in the urban environment is an important mechanism for the perception of policy results and health plans in different sectors. Also important is the preparation of a Development Plan for Health for planning and structuring priorities in this area.

The V Phase focuses on three main topics: environmental promoters of support and care; healthy lifestyle; and healthy urban environments and design [4]. However, cities can also work other topics if those are considered central to achieving the goals. This phase gives cities the opportunity to work their strategies and policies choosing health as a central theme among all sectors. The WHO requires cities to meet the objectives and themes of V Phase; in order to fulfill their obligations, cities must gain the support, resources and structures to implement the Healthy City project.

3 VianadoCastelo: WHO Healthy City

Viana do Castelo is located in the northeast of Portugal and belongs to the sub-region of Minho-Lima. The city is a district capital, and in 2011 comprised 38,000 residents encompassing Darque, Areosa, Meadela, Monserrate and Santa Maria. The municipality has an area of 314, 36 km² and has about 89,000 inhabitants. The city is bounded to the West by the Atlantic Ocean, Caminha in the North, Ponte de Lima in the East and Barcelos and Esposende in the South.

In 2008 the Minho-Lima region was, by NUTS III, the 14th most populated region in the country. The average annual growth rate was 0.2% and 20.9% of the population are over 65 years old. Viana do Castelo has an average annual rate of population growth of 0.5% and became the most populous and the youngest municipality in the Minho-Lima [6].

Economically in the same year, Minho-Lima contributed with a GDP of 5.3% and a per capita GDP of 7.9 billion Euros.

In 2009, the region had 5.5% of the active population in Northern Portugal and Viana do Castelo had 41.8% of the Minho-Lima region [6].

The Minho-Lima region in 2007 occupied the 11th position in the gross production of electricity, 67% of this energy came from renewable sources, representing 5.8% of the national production.

3.1 Viana do Castelo and Health

Viana do Castelo joined the WHO Healthy Cities project in 1997 and was a promoter of the Portuguese Network of Healthy Cities, starting his submission for the European Network of Healthy Cities in 1998. Determined for integration into the European Network in 2000, the city began an urban renewal supported by the Program for Rehabilitation and Environmental Improvement of Urban Areas and in 2003 joined the Local Agenda 21 [7,8]. Viana do Castelo in 2004 integrated the IV Phase of the WHO European Healthy Cities Network. Present also in Phase V, the city continues to develop programs and projects to promote wellness and healthy lifestyles. The Healthy City Office of Viana do Castelo has created a Healthy Development Plan to structure and organize their interventions along with other organizations, companies, schools and communities.

The initiative that stands out is the development of an observatory using WHO indicators for the construction of an Urban Sustainability Index.

This index is being developed for the city of Viana do Castelo to evaluate Urban Sustainability. The Index is composed of common indicators of WHO allowing comparisons with other cities that adopt the same methodology. The evaluation of markers was performed through a more or less extended sub-indicator.

3.2 Viana do Castelo: Urban Sustainability Index

The sustainability evaluation of Viana do Castelo city uses a multicriteria methodology and is based on the following set of indicators and sub-indicators, listed in table 1.

Table 1. Environmental Indicators of the World Health Organization (WHO)

C1 Air pollution
◦ CityAir (air quality index) f(PM10, NO2, CO, C6H6, O3) [10]
◦ Average annual emissions of PM10
◦ Average annual emissions of NO2
◦ Average annual emissions of CO
◦ Average annual emissions of C6H6
◦ Average annual emissions of O3
C2 Water quality
◦ Number of drinking water infrastructure
◦ Number of parameters treatment and preservation of water quality
◦ Number of parameters analyzed in drinking water
C3 Percentage of water pollutants removed from the sewage total
C4 Quality index of household garbage collection
◦ Area of selective collection
◦ Rates of garbage recovery
◦ Number of eco-points by inhabitants
◦ Frequency of selective collection
C5 Quality index of household garbage treatment
C6 Relative area of green spaces in the city
◦ Area of principals green spaces
◦ Index of green spaces, parks and gardens (relationship between the total of green areas/total population)
◦ Extension of woodland (meters)
◦ Number of trees in the urban area
◦ Water used for irrigation (litres/year)
◦ Detectors of rain associated with the irrigation system
◦ Timers associated with the irrigation system
C7 Public access and green space
◦ Use of green spaces
◦ Abandoned spaces (area of green spaces abandoned / total area of green spaces)
C8 Industrial spaces abandoned
◦ Number of spaces degraded
◦ Area of occupancy in the city
◦ Nature/use of existing infrastructures
◦ Types of buildings and conservation status

◦ Period of time resulting in a state of abandonment
C9 Sport and leisure
◦ Number of spaces/municipal sports equipment
◦ Number of existing sports associations
◦ Number of sports practiced
◦ Rate practitioners by sport
◦ Number of routes demarcated
◦ Number of living spaces (picnic parks, gardens ...)
◦ Extension of the cycle paths
◦ Number of maintenance circuits (location and type of equipment)
◦ Number and nature of activities developed by the municipality
◦ Number of private sports equipment
C10 Pedestrian streets
Supply: ◦ Exclusive pedestrian area (gardens, squares...)/area of public space
Demand: ◦ Pedestrian Flow: number of pedestrian/h on a date track section (primary roads)
C11 Cycling in the city
Supply: ◦ Extension of the cycle paths exclusive (built)/extension of paved roads
◦ Extension of the cycle paths exclusive (in plan)/extension of paved roads
◦ Extension of the cycle paths exclusive (provided)/extension of paved roads
◦ Extension of the cycle paths exclusive (built)/extension of soft roads
◦ Extension of the cycle paths exclusive (in plan)/extension of soft roads
◦ Extension of the cycle paths exclusive (provided)/extension of soft roads
◦ Number of supporting infrastructure (parking bays, points intermodal ...)/extension of the cycle paths
Demand: ◦ Number of cyclists / total number of vehicles 4 and 2 wheels
◦ Number of cyclists/ cycle paths
C12 Public Transport
◦ Number of companies operating in the city (urban and interurban)
◦ Type/offer of transport (bus, taxi, train, ferry, funicular)
◦ Utilization rate of transport
C13 Network coverage of public transport
◦ Area covered by public transport
◦ Number of points of embarkation
◦ Rate frequency at the times and destinations
◦ Intermodal network
C14 Living space
◦ Number of abandoned buildings/total number of buildings/via
◦ Number of inhabited buildings (ground floor and upper floors)
◦ Number of residential buildings with more than one entry
◦ Number of buildings with street

4 Conclusion

A methodology was developed to assess the sustainability of Viana do Castelo. The indicators recommended by the WHO were used and a set of sub-indicators was defined to assess them. Currently the diagnostic report of the city is being developed, and two of the three monitoring campaigns have already been made. At the end of the third data collection and after organizing the results from the three phases of data collection, current situation of the city will be assessed through the developed model.

As mentioned, the model will evaluate the Urban Sustainability in Viana do Castelo and will have the contribution of 14 indicators proposed by the WHO, that will be evaluated by a set of sub-indicators.

Often conditioned by the availability of statistical information, the indicators will be aggregated by a system of weights representing the motivations and objectives of the study. Identification and construction of sub-indicators were based on the judgment of the research team regarding their choice and relevance. The establishment of systems of weights for the sub-indicators also resulted from the research team.

Obtaining an overall assessment of the City based on this methodology will allow comparing their current situation with other cities promoting the WHO Healthy Cities project.

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