IOSR Journal Of Humanities And Social Science (IOSR-JHSS)
Volume 24, Issue 8, Ser. 6 (August. 2019) 29-35
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Social Impact of Urban Green Spaces

L. Giuffré[1], C. Bonafina[1], C. Vespasiano[1], E. Ciarlo[1].
[1]*Universidad de Buenos Aires. Facultad de Agronomía. Buenos Aires, Argentina.*

Abstract:A city is an artificial ecosystem where thousands or even millions of people reside permanently. Green spaces represent a fundamental component of the urban ecosystem and are important for several reasons: to facilitate physical exercises, recreational opportunities, aesthetic enjoyments, improving well-being, and aid in treatment of mental illness. On the other hand, having access to green spaces canreduce social inequalities.
The present work has interconnected objectives to the main rol of green spaces in urban society: one is about to study the benefits of green spaces in a social approach, the second one is to review experiences in other countries and finally summarize positive impacts of people´s contact with green urban spaces.
In general, the health benefits of urban green space outweigh its potential detrimental effects, such as allergies to pollen, infections and injuries. Government's interventions will include measures that aim to remove barriers to green space utilization, and enhance their utilization by specific population groups, such as children, elderly, working age adults, pregnant women, cultural and ethnic minorities, and individuals with mental illness, cognitive impairments or physical limitations.

Keywords:*Green spaces, Social Impact, Sustainable Cities, Quality of urban life.*

Date of Submission: 03-08-2019 Date of Acceptance: 19-08-2019

I. INTRODUCTION

In Argentina, the National Ministry of Science and Technology (MINCYT) presentedin Buenos Aires at 2017 the CITIDES Program (National Program of Science, Technology and Innovation for Sustainable Development), that is oriented to promote and manage from the fields of science, technology and innovation, lines of action that address specific problems of sustainable development in the national territory. One of its objectives is related to Sustainable Cities including the relationship with urban green spaces and their benefits [1].

Usually, parks, natural reserves, squares, trees, public gardens, and other green areas of cities are the only free spaces for citizens. As these spaces are strategic to improve the quality of life, the decision makers of each city should plan a matrix to organize them, develop their growth and improve to enhance their multiple benefits. A city is an artificial ecosystem where thousands or millions of people reside permanently; in order to be created and developed, the original wild ecosystems are modified, devastated or displaced [2].

An interesting review presented by Kondo et al. [3], remarks that over half of the world's population now lives in urban areas, and this proportion is expected to increase. While there have been numerous reviews of empirical studies on the link between nature and human health, very few have focused on the urban context. Their review is a first step toward assessing the possibility of causal relationships between nature and health in urban settings. Through systematic review of published literature, they found consistent negative association between urban green space exposure and mortality, heart rate, and violence, and positive association with attention, mood, and physical activity. More studies using rigorous study design are needed to make generalizations, and meta-analyses, of other health outcomes possible. These findings may assist urban managers, organizations, and communities in their efforts to increase new or preserve existing green space.

World Health Organization [4] emphasize the role of green spaces such as parks and sports fields as well as woods and natural meadows, wetlands or other ecosystems, that represent a fundamental component of any urban ecosystem. Green urban areas facilitate physical activity and relaxation and form a refuge from noise. Trees produce oxygen, and help filter out harmful air pollution, including airborne particulate matter. Water spots, from lakes to rivers and fountains, moderate temperatures. Urban parks and gardens play a critical role in cooling cities and provide safe routes for walking and cycling for transport purposes as well as sites for physical activity, social interaction and for recreation. Recent estimates show that physical inactivity, linked to poor walkability and lack of access to recreational areas, accounts for 3.3% of global deaths.

Green spaces also are important to mental health. Having access to green spaces can reduce health inequalities, improve well-being, and aid in treatment of mental illness. Some analysis suggests that physical activity in a natural environment can help remedy mild depression and reduce physiological stress indicators.

II. OBJECTIVES

The present work has three objectives that are interconnected to the main rol of green spaces in urban society: one is about to study the benefits of green spaces in a social approach, the second one is to review experiences in other countries. And finally summarize positive impacts of people´s contact with green urban spaces.

III. DEVELOPMENT

The environmental problems inherent to urban growth are complex: high quality soils are used for the growth of cities, large amounts of waste are produced, and greenhouse gases are produced. Urban green spaces provide environmental benefits, with respect to the soil, as they act as reservoirs of water, and if the soil is sealed, there is an increase in temperature, which is called "heat islands". In the urban landscape there are interesting innovations, such as vegetable terraces and vertical gardens, and social benefits that are psychological and even physiological have already been beneficial in the recovery processes of patients with rooms overlooking green spaces [5].

Urban soils can be taxonomally classified as Technosols; soils in which their properties and pedogenesis are dominated by a technical origin: they include urban soils, but also mining soils. Their parental materials are of all kinds, built or exposed on the surface by human action. Generally, the soil profile is not developed, but there are cases of pedogenesis with clays illuviation. Many Technosols must be handled carefully since they may contain toxic substances resulting from industrial processes [6].

One example is the Ecological Reserve of Buenos Aires, Argentina, on the Costanera Sur (South Dock), with soils generated from the remains of buildings, carbonates, deposited sediments and vegetation that has adapted to the site. Some soils, very few, maintain their original characteristics (Botanical Garden) while others have undergone successive transformations by decapitation or filling. Within the area of the Autonomous City of Buenos Aires, green spaces, in addition to being scarce, are distributed in a heterogeneous manner, with a surface area well below that indicated by the World Health Organization, which promotes an area of 10 to 15 m^2 per habitant. This good, the air and the sun in contact with the soil, is a basic need of man and is closely related to his health and well-being [7].

Lehman & Stahr [8], stated that anthropogenic and natural urban soils are of increasing significance in a world with accelerating urbanization. Thus, anthropogenic urban soils must be considered as a fundamental ecological asset for land-use planning. Furthermore, they are of interest for fundamental soil sciences, since their properties are rarely investigated and can differ substantially from landscape soils. Numerous studies on their properties exist, particularly with respect to contamination. Additionally, the significance of (anthropogenic) urban soils is highlighted to strengthen consideration in urban spatial planning.

Zhou&Parves [9] presented a paper that explores social benefits of urban green spaces, which includes recreational opportunities, aesthetic enjoyments, adjusting psychological well- being and physical health, enhancing social ties, and providing educational opportunities. To analyze existing evaluation and measure techniques of urban green space, the paper points out that a single measurement only evaluates certain aspects of urban green spaces, which may not always be suitable to comprehensively assess social benefits from both providers' and consumers' perspectives.

A city is an artificial ecosystem where thousands or even millions of people reside permanently. In order to be created and developed, the original wild ecosystems are modified, destroyed or displaced. It is not self-sufficient and depends on the provision of goods and services from nature (close or far away). It is a model whose "metabolism" is unsustainable and parasitic, because it requires the constant entry of resources, raw materials and energy. And, in addition, it demands places where to leave their waste [2].

In the city of Buenos Aires, 161,473 tons of plastic waste per year are produced, affecting the infrastructure and environment. The environmental impact is high, due to its low weight, plastics are spread and easily transformed into garbage, which causes damage to the urban infrastructure: they pollute the parks and squares, cover sinks and generate waterlogging during storms. For these reasons, important economic and human resources are allocated to uncover the drains and prevent the city from flooding. Due to the wind, this waste also affects water basins, coasts and wetlands, among others.

Plastic waste, once degraded, remains as nano particles in water. These chemicals are incorporated by the fish, which are, in turn, one of our sources of food, the plastic takes approximately 150 years to degrade. The Environmental Protection Agency of Buenos Aires banned, from last January 2017, the delivery of non-biodegradable bags and their replacement by eco-bags. This initiative is in line with Law 1854, known as "Zero Waste" [10].

Another aspect to consider in sustainable cities and their green spaces is electromagnetic pollution.These technologies are sources of potential health risks as a result of their use. Among the most studied are the cellular telephony and the electric transmission lines and their associated equipment. Scientists have suggested that exposure to EMF (electromagnetic fields) emitted by these devices could have adverse

effects on health, such as cancer, especially leukemia and brain cancer, reduced fertility, memory loss and adverse changes in the behavior and development of children. However, the real risk to health is still unknown, although for certain types of EMF it has been found that at controlled levels the risk is very low or nonexistent.

It is suggested then, to adopt the precautionary principle, when the risk management is in situations of scientific uncertainty, so the need for an action that must be adopted without waiting for other definitions of science. New Zealand and the European Union resolved that the antennas have to be installed at least 500 meters from any area with population, so in a healthy environment such as green spaces should take extreme precautions with distances. In 2011 the International Agency for Research of Cancer has classified radiofrequency electromagnetic fields as possibly carcinogenic for humans (Group 2 B) while 31 scientists from 14 countries met in Lyon to assess the potential carcinogenic hazards from exposure to electromagnetic fields[11].

A study of Chiesura [12] explores the benefits urban parks provide by examining previous research and by surveying parks visitors. The researcher studies the environmental benefits of urban green spaces but primarily investigates the psychological and social influences and attributes of park areas. Survey results indicate that: (1) parks visitors go for relaxation and as an escape from the city itself, (2) being in nature gives them the feeling of freedom, and (3) people are unsatisfied with the current amount of green space present in the city. Survey results also showed that while there was no significant difference in responses based on gender, there were differences depending on age. The study concludes that a truly sustainable city will need to give greater importance to its natural spaces and to create spaces for social and psychological renewal.

"Soil matters for humans and ecosystems" is the title of the Vienna Declaration, closing the International Year of Soils and celebrating the Soil Day, on December 2015[13]. The declaration claims traditional concepts, in turn reflects the new approaches of soil science and proclaims the challenges that arise from the current socio - environmental context. It stands out: "The soils of the world, extremely different and dynamic, provide numerous functions and services that human beings require and are essential in most aspects of our lives [14]. Within the ecosystem services (ES) of soils functions of recreation and socialization must not be forgotten.

According to Adhikari& Hartemink[15], soil plays a crucial role in ecosystem functioning. In the 1990s ES research focused on developing the concept and framework and only a few studies linked soil properties to ecosystem services. Cultural services had only a few studies, and supporting services were mostly related to soil physico-chemical and biological properties. Soil scientists should engage professionals from other disciplines to further promote the contribution of soils to ecosystem services delivery and human well-being. ES soil studies could be used in local and national policy development and program on natural resource use and management

In urban areas, as in rural areas, soil provides key ES including water-filtering and carbon capture.It also shields against harmful substances and supports recreational services including public gardens, playing fields, road verges and parks. In addition, soil resources are under increasing pressure, especially as land use changes and urbanisation increases. By 2030, over 60 per cent of the world's population is expected to live in cities. To ensure protection of soil in urban areas, planners should integrate soil quality into evaluation of soil properties, such as the ability tosupport plant life or capture carbon, based on combinations of data that are easily measurable.Local knowledge of soil resources can also be incorporated into the evaluation method, the output from which is asoil quality class value, which ranges from 'very low' to 'very high'. This value can provide urban planners with anindication of areas suitable for builling new developments without sealing good quality soil[16].

As Vrščaja et al. [17] state, soil represents a complex medium, which makes it difficult to evaluate its quality. In the past, soil quality evaluation was biased towards agricultural production rather than for purposes related to the broad range of functions and services that it performs. Soil function and soil quality in the urban environment differ due to the different needs and roles of soil within the diversity of urban land uses. The quality of urban soil should be evaluated to support public services for good environmental quality management. Planners should also adjust their decisions twards more sustainable urban design.

Poggio et al.[18] in an example from Grugliasco, Italy, emphasize that humanscontact with soils is more likely in urban than in rural areas, and is strongly dependent on land use. Spatial planning and land management may have important impacts on the potential transfer of pollutants from contaminated soils to humans, so they proposed a land use-based method for the evaluation of human health risks arising from heavy metal-contaminated urban soils, addressing the influence of planning measures and land use changes on such risks. The method accounts for the role of the bioavailability of soil metals as a key factor in health risk.

In Sweden there is a growing trend for urban gardening in recent years. Swedes passionately enjoy all green space to grow fresh food and get back in touch with nature. In Malmö, the third most populous Swedish city, crops spread over roofs, balconies of buildings and even on roads The Swedish are discovering their passion for urban gardening to grow their fresh food and get back in touch with nature. As part of a global

movement, a growing number of inhabitants of Swedish cities are developing their own gardens and plots or work in public gardens built in industrial or commercial spaces, and on ceilings. With the help of these new green areas, they are making a better urban environment with reduction of air pollutants and the buffer effect of vegetation. At Stockholm the area of a disused railway was converted into a common space for hundreds of amateur gardeners [19].

With reference to the Federal District of Mexico, it presents a high vulnerability to changes in climate change, since a large part of its surface is highly urbanized and there is great pressure on its green areas. Carbon biannual sequestration carbon assessed was very important in the Forest of San Juan de Aragon, so this allowed work to revalue tree species in urban areas beyond their recreational and social contribution [20]. According to Rivas Torres [21], the importance of green areas for the environmental and social sustainability of cities is indisputable. In Mexico, specifically in the capital, they are particularly interested in the relationships they have with the environment, and the design of the city itself. With its 12,828 ha (21% of the urban area of the Federal District), green areas are a very valuable natural heritage for urban sustainability; the mitigation of the "island of heat", the reduction of pollution and the capture of carbon are counted as the main environmental benefits of the leaf area of trees and urban forests; and other benefits not less important: ecological, social, economic, psychological and spiritual

A new study indicates that there are more cases of dementia in people living near streets with a lot of traffic, possibly due to noise and environmental pollution. Researchers followed two million people in Canada for 11 years. The doctor Hong Chen, Public Health of Ontario (Canada), is one of the principal researchers of the study. According to the analysis, 243,611 cases of dementia were diagnosed during those years - from 2001 to 2012 - it was observed that the cases of dementia were: 7% higher among those who lived 50 meters away, 4% higher among those who lived between 50 and 100 meters, 2% higher among those who were between 101 and 200 meters. The research suggests that ultrafine particles, noise, nitrogen oxides and rubber tiresuse can influence the development of the disease. However, the researchers only observed where people with dementia lived, so they suggest doing more studies on this disease. According to experts, it is estimated that some 50 million people worldwide suffer from this disease, which diminishes the functions of the brain and whose causes are still unknown [22].

Beijing, China, is undergoing continuous urbanization, and considering the individual availability of urban green spaces is essential for alleviating the ecological problems created by this urbanization, especially in relation to improving residents' well-being. To prove this effect, this article analyzed the social, mental, and physical well-being of current Beijing residents to determine their level of satisfaction, then applied the seemingly unrelated regression model to study how Beijing's urban green spaces impact this well-being. The result showed that the higher the degree of resident participation with green spaces, the higher their well-being. Such participation includes actions like the frequency at which residents visit a park or green space. A significant inverted U-shaped effect was found between residents' well-being and their distance from a park or public green space, indicating that residents with the highest well-being live between 1 and 5 km away, and residents with the lowest well-being live over 10 km away. Further, age, education, career status, marital status, years of residence in Beijing, residential area, and average income per month also have a significant impact on residents' well-being. This study shows that green spaces can have a very positive effect on people's welfare and provides support for their further promotion [23].

Urban green space is nowadays so interesting for researchers and the related organizations that it is considered as an indicator of the development in societies. A study was performed by Kiani et al.[24]to investigate the city parks of Nehbandan, Iran, to investigate the effects of green spaces in cities on life quality improvement of citizens. The descriptive-analytic research approach was based on library studies, documentation, and field reviews done through direct investigation of the city parks and receiving the viewpoints of experts and citizens (visitors to the parks). The results suggest that green spaces within the city of Nehbandan have social, economic and ecological efficiency among which their environmental function or ecological productivity is the most important effect of these spaces making the citizens' quality of life more satisfactory through accessing to suitable green spaces. About % 50 of interviewees paid attention to this issue and they believed the availability of green spaces within the city can lead to reduction of environmental pollutants and elevation of the citizens lifestyle.Some factors considered were recreation, enjoying life and refreshment.

Most of our global population and its CO_2 emissions can be attributed to urban areas. The process of urbanization changes terrestrial carbon stocks and fluxes, which, in turn, impact ecosystem functions and atmospheric CO_2 concentrations. In Seattle, USA, Huytra et al.(2010), reported that the total carbon stocks and mean vegetated canopy cover were surprisingly high, even within the heavily urbanized areas, well exceeding observations within other urbanizing areas and the average US forested carbon stocks. As urban land covers and populations continue to rapidly increase across the globe, these results highlight the importance of considering vegetation in urbanizing areas within the terrestrial carbon cycle.

Priego et al.[25], in order to study the social perception and the appreciation of nature by people of different social levels and in cities of different cultures, started an international cooperation project between Germany and Chile. Upper-middle and lower-middle class neighborhoods were chosen in each of the countries. It was determined how people from different social and cultural backgrounds present a different use and perception of the urban landscape. In the same way, in Chile the social condition of the citizen conditions the possibility of access to green areas. The authors commented other studies that point to the positive correlation in an increase in the biodiversity of green urban ecosystems.

In the United Kingdom, Kazmierczak & James[26]studied social inclusion in green spaces. Combination of issues such as unemployment or low income, bad health, high crime and family disintegration can result in social exclusion and breakdown of local communities, consequently lowering the quality of life of individuals and groups. These phenomena tend to be concentrated in socially excluded areas. This literature review argues that urban green spaces in socially excluded areas can increase community cohesion and inclusion of individuals into society in four ways: 1) they are free and accessible to all, 2) they provide space for human interactions, 3) they relieve stress and restore mental fatigue, thus reducing aggression, and 4) they offer opportunities for urban residents to participate in voluntary work. The authors call for green space creation and improvement in socially excluded areas to improve the quality of life of their residents and to create cohesive and inclusive communities. Jennings & Bamkole [26] (2019) worked on the idea of social cohesion that involves the interpersonal dynamics and sense of connection among people, and that increased social cohesion can be associated with various physical and psychological health benefits, and also how the presence of urban green spaces can encourage positive social interactions that cultivate social cohesion in ways that enhance health and well-being.

Urban green spaces have also been linked to positive health behaviors and outcomes including increased physical activity and social engagement. Understanding the relationship between social cohesion and urban green space is important for informing holistic approaches to psychological health and well-being.

As FARN [2] reports,international efforts to preserve the natural environment are mainly concerned with large, bio-diverse and relatively untouched ecosystems or with individual animal or vegetal species, either endangered or threatened with extinction. Much less attention is being paid to that type of nature close to where people live and work, to small-scale green areas in cities and to their benefits to people. Increasing empirical evidence, however, indicates that the presence of natural areas contributes to the quality of life in many ways. Besides many environmental and ecological services, urban nature provides important social and psychological benefits to human societies, which enrich human life with meanings and emotions, which fulfill important immaterial and non-consumptive human needs.

Fisher et al.[28] reported that several recent international declarations and development goals have highlighted the importance of green space as a determinant of health and well-being, included a commitment to providing each child with 'access to healthy and safe environments', including green spaces in which to play and undertake physical activity This aim of ensuring access to 'safe and inclusive greenspaces' is further supported by the United Nation's (UN) [29] throw the Sustainable Development Goals (SDGs), with SDG setting the target thatby 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities.

Braubach et al.[30]stated that modern urban life style is associated with chronic stress, insufficient physical activity and exposure to anthropogenic environmental hazards. Urban green space, such as parks, playgrounds, and residential greenery, can promote mental and physical health and reduce morbidity and mortality in urban residents by providing psychological relaxation and stress alleviation, stimulating social cohesion, supporting physical activity, and reducing exposure to air pollutants, noise and excessive heat. The evidence for health benefits due to relaxation, stress reduction and other psychological effects appears to be very consistent.

Many studies have demonstrated associations between greenery near residence and health benefits suggesting that being in green space can produce health benefits regardless of the level of physical activity.These health benefits depend on the overall greenness of residential areas and can be provided by adequate urban planning mechanisms. Green space can also contribute to the reduction of environmental and health inequalities by providing all population groups with equal opportunities to engage in and benefit from natural environments.

IV. CONCLUSIONS

It is valid to conclude that there is a large amount of social benefits of urban green spaces: park visitors come for relaxation, which include recreational opportunities, aesthetic enjoyments, adjusting psychological well being and physical health, enhancing social ties, and providing educational opportunities, nature gives individuals the feeling of freedom.

In Italy,a paper states that humans contact with soils is more likely in urban than in rural areas and proposed a land use-based method for the evaluation of human health risks arising from heavy metal-contaminated urban soils. On a different continent, in Mexico DF, large part of its surface is highly urbanized, so they revalued tree species in urban areas beyond their recreational and social contribution and high carbon biannual sequestration.

In Ontario, Canada, a new study indicates that there are more cases of dementia in people living near streets with a lot of traffic, possibly due to noise and environmental pollution. In the same way Beijing, China, is undergoing continuous urbanization and a relationship was found between residents' well-being and their distance from a park or public green space. This resultindicates that residents with the highest well-being live, between 1 and 5 km away, and residents with the lowest well-being live over 10 km away.

A study in Nehbandan, Iran, investigated the effects of green spaces in cities on life quality of citizens. The results suggest that green spaces have social, economic and ecological efficiency, making the citizens quality of life more satisfactory.In Seattle, USA, Huytra et al.[31], reported that the total carbon stocks and mean vegetated canopy cover were surprisingly high, even within the heavily urbanized areas, these results highlight the importance of vegetation in urbanization.

In the United Kingdom, Kazmierczak & James [26] studied social inclusion in green spaces. Green space creation in socially excluded areas improve the quality of life of their residents and create cohesive and inclusive communities.

Urban green space, such as parks, playgrounds, and residential greenery, can promote mental and physical health and reduce morbidity and mortality in urban residents by providing psychological relaxation and stress alleviation, stimulating social cohesion, supporting physical activity, and reducing exposure to air pollutants, noise and excessive heat.

Associations exist between greenery near residence and health benefits suggesting that being in green space can produce health benefits regardless of the level of physical activity. Green space can also contribute to the reduction of environmental and health inequalities by providing all population groups with equal opportunities to engage in and benefit from natural environments.

In general, the health benefits of urban green space outweigh its potential detrimental effects, such as allergies to pollen, infections and injuries. Interventions will include measures that aim to remove barriers to green space utilization, and enhance their utilization by specific population groups, such as children, elderly, working age adults, pregnant women, cultural and ethnic minorities, and individuals with mental illness, cognitive impairments or physical limitations. Examples of such measures can include the provision of greenery in deprived neighbourhoods and improving safety in urban parks. Improving the availability of green spaces in under-served and socioeconomically disadvantaged communities may help to reduce health inequalities in urban populations.

ACKNOWLEDGEMENTS

This work was founded by Project UBACyT 20020170200263BA 2018-2019.

REFERENCES

[1]. MINCYT. Ministerio de Ciencia y Técnica. Presentación del Programa Nacional de Ciencia, Tecnología e Innovación para el Desarrollo Sustentable. Polo Científico Tecnológico. 2017. Buenos Aires. 26 de abril de 2017. www.polo.mincyt.gob.ar*In Spanish*

[2]. FARN.Fundación Ambiente y Recursos Naturales. Informe Ambiental 2015. La estructura ecológica de las ciudades y su importancia cultural y ambiental. www.farn.org.ar/wp-content/uploads/2015/06/informefarn2015.pdf *In Spanish*

[3]. M.C. Kondo, J.M. Fluehr, T. Mckeon andC.C. Branas Urban Green Space and Its Impact on Human Health. *Int J Environ Res Public Health*. 15(3): 2018. 445 1-28. Doi: 10.3390/ijerph15030445

[4]. WHO. Urban green spaces Health and sustainable development. 2019. Https://www.who.int/sustainable.../cities/.../urban-green-space/en/

[5]. L.Giuffré 2016. Edafología y Diseño del paisaje. In: Edafología, bases y aplicaciones ambientales argentinas. Marta E. Conti y L. Giuffré (editoras). Editorial Facultad de Agronomía. Pp 605-616. *In Spanish.*

[6]. WRB. Base referencial mundial del recurso suelo 2014, Actualización 2015. Sistema internacional de clasificación de suelos para la nomenclatura de suelos y la creación de leyendas de mapas de suelos. Informes sobre recursos mundiales de suelos 106. FAO, Roma.

[7]. S. Ratto y L. Giuffré. Contaminación en suelos urbanos. En Libro Agrosistemas: impacto ambiental y sustentabilidad.: 2013. pp 99-102.

[8]. A. Lehmann, andK. Stahr. Urban Soils. J Soils Sediments. 2007. 7: 247. Doi:10.1065/jss2007.06.235

[9]. X Zhou and R.M. Parves. Social benefits of urban green space. Management of Environmental Quality vol. 23 No. 2: 2012. 173-189. DOI: https://doi.org/10.1108/14777831211204921
[10]. F.V. Consoli. La Ciudad de Buenos Aires produce 161.473 toneladas de residuos plásticos al año. Https://www.lanacion.com.ar › Sociedad. Medio ambiente. 12 de enero de 2017.
[11]. IARC. International Agengy for Research on Cancer.2011Https://www.iarc.fr/wp-content/uploads/2018/07/pr208_E.pdf (Last accessed: July 18th, 2019)
[12]. A. Chiesura. he Role of Urban Parks for the Sustainable City. *Landscape and Urban Planning*, 68. 2004. 129-138 Pp.Http://www.sciencedirect.com/science/article/pii/S0169204603001865
[13]. FAO."Soil matters for humans and ecosystems" Vienna Declaration, International Year of Soils and celebrating the Soil Day, on December 2015.
[14]. G. Lorenz. Las ciencias de suelo en el siglo 21: enlazando sistema, funciones y planificación. *Quebracho* 23(1-2). 2015.105-116.
[15]. K. Adhikari and A.E. Hartemink 2016. Linking soils to ecosystem services- A global review. *Geoderma* 262 (2016) pp 101–111.http://dx.doi.org/10.1016/j.geoderma.2015.08.009
[16]. European comission, 2008. Protecting valuable urban soil. Http://ec.europa.eu/environment/integration/research/newsalert/pdf/134na1_
[17]. B. Vrščaja, L. Poggio and F Ajmone Marsan. A method for soil environmental quality evaluation for management and planning in urban areas. Landscape and Urban Planning , Issues 2–4, 2008 1: 81–94. Http://dx.doi.org/10.1016/j.landurbplan.2008.08.005
[18]. L. Poggio, B. Vrščajb, E. Hepperlea, R. Schulina and F. Ajmone Marsanc. Introducing a method of human health risk evaluation for planning and soil quality management of heavy metal-polluted soil.sAn example from Grugliasco (Italy). *Landscape and Urban Planning 88* 2008. 64-72.
[19]. La Nación. Furor por la jardinería urbana en Suecia. *La Nacion, online versión.* 2016 https://www.lanacion.com.ar/el-mundo/furor-por-la-jardineria-urbana-en-suecia-nid1956413
[20]. A. Mijangos-Hernández, F. Rojas-García & H. Benavides. Estimación del contenido y captura de carbono en la biomasa arbórea del Bosque de San Juan de Aragón, Distrito Federal. 2017. Https://www.researchgate.net/publication/293817489_Estimacion_del_contenido_y_captura_de_carbono_en_la_biomasa_arborea_del_Bosque_de_San_Juan_de_Aragon_Distrito_Federal (accessed Jun 19, 2017).
[21]. D. Rivas Torres D. Planificación, Espacios Verdes y Sustentabilidad en el distrito federal. "Tesis para optar por el grado de Doctor en Diseño" México D. F. Julio de 2005. 210 pp http://www.rivasdaniel.com/Espaciosverdes.pdf
[22]. EFE. EFE Agency. Vivir cerca de una calle con mucho tráfico, un riesgo para la salud mental. Clarín. Jueves 5 de Enero de 2017.
[23]. B. Ma, T. Zhou, S. Lei, Y Wen and T.Htun. Effects of urban green spaces on residents' well-being. *Environment Development and Sustainability*. 2014. 1-17Pp.
[24]. A. Kiani, M.Javadiyan and V. Pasban. Evaluation of Urban Green Spaces and their Impact on Living Quality of Citizens (Case Study: Nehbandan City, Iran). Journal of Civil Enginnering and Urbanism 4: 2014. 89-95Pp.
[25]. C. Priego González de Canales, J.H. Breusteand J. Rojas Hernández.Espacios naturales en zonas urbanas. Análisis comparado de la ciudad alemana de Halle ylas chilenas de San Pedro de la Paz y Talcahuano. *Revista internacional de Sociología (RIS*) Vol.68, nº 1: 2010. 199-224Pp. DOI:10.3989/ris.2008.05.14
[26]. A.E. KazmierczakandP. James. The role of urban green spaces in improving social inclusion. 2018. 354-3653 http://www.irbnet.de/daten/iconda/CIB16580.pdf
[27]. V. Jennings and O. Bamkole. The Relationship between Social Cohesion and Urban Green Space: An Avenue for Health Promotion *Int J Environ Res Public Health.*2019. 16(3): 452. Doi: 10.3390/ijerph16030452
[28]. T.B. Fisher, U. Jha-Thakur, P. Fawcett, S. Clement, S. Hayes and J. Nowacki. Consideration of urban green space in impact assessments for health Impact.*Fisher Assessment and Project Appraisal*, Volume 36, 2018 - Issue 1.
[29]. UN. United Nation(UN). Sustainable Development Goals (SDGs) 2015. https://www.un.org/sustainabledevelopment/es/objetivos-de-desarrollo-sostenible/
[30]. M. Braubach, A. Egorov, P. Mudu, T. Wolf, C. Ward Thompson and M. Martuzzi. Effects of Urban Green Space on Environmental Health, Equity and Resilience. *Nature-Based Solutions to Climate Change Adaptation in Urban Areas*. 2017. 187-205Pp.Https://link.springer.com/chapter/10.1007/978-3-319-56091-5_11
[31]. L.R. Hutyra, B. Yoon and M. Alberti. Terrestrial carbón stock across a gradient of urbanization: a study of the Seattle, W.A. región. *Global Change Biology*. 2010. 1-15 Pp.