ANALYSIS OF THE POPULATION’S PERCEPTION REGARDING URBAN AFFORESTATION IN NEIGHBORHOODS OF DIFFERENT SOCIAL CLASSES

Juan José Mascaró

ABSTRACT

We conducted a case study in the Brazilian cities of Passo Fundo, Rio Grande do Sul State, and Lages, Santa Catarina State to assess the population’s perception of urban forests in neighborhoods of distinct social classes. Urban afforestation should not be restricted to handling and caring for trees, but it should also be planned and implemented according to the residents’ desires and needs. The results show that the socioeconomic status of the populations studied is not directly correlated to their perception about tree planting on the streets and avenues of these two cities. Although the lifestyles and the economic possibilities are distinct, residents’ concern with urban vegetation was similar. In both areas, the vast majority of the population was in favor of planting trees on public streets.

Keywords: urban trees; user’s feedback; social classes.

ANÁLISE DA OPINIÃO DA POPULAÇÃO SOBRE A ARBORIZAÇÃO URBANA EM BAIRROS DE DIFERENTES CLASSES SOCIAIS

RESUMO

Com o objetivo de conhecer a opinião da população de diferentes tipos de bairros em relação à arborização pública, foram realizados estudos de caso nas cidades de Passo Fundo -RS e Lages -SC. A arborização urbana não deve ser exclusivamente centrada nas árvores e no seu manejo e cuidado, mas também no planejamento e na execução em função dos cidadãos e de suas necessidades. Os resultados obtidos verificam que o nível socioeconômico da população consultada não está relacionado diretamente com a opinião sobre a existência de arborização nas ruas e avenidas dessas duas cidades. Embora os estilos de vida e as possibilidades econômicas sejam diferentes de acordo com o bairro, a relação de interesse dos cidadãos pela vegetação urbana mostra-se semelhante. A grande maioria da população consultada é a favor de mais árvores nas vias públicas

Palavras-chave: arborização urbana; opinião dos usuários; classes sociais;

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INTRODUCTION

Only after studies carried out between the decades of 1970 and 1980 that residents’ needs and preferences of central areas of cities started to be accounted in urban afforestation. Getz, Karow and Kielbaso (1979), for example, carried out research on 250 residents of the city of Detroit (USA) to identify their attitudes regarding urban afforestation. The population surveyed recognized the importance of urban afforestation, ranking it as the second most important issue to be addressed by the Municipal Government. Education came in first. The population of Detroit was asked as to where urban afforestation should take place and residents ranked their residences in the first place, followed by parks, squares and front gardens of buildings, showing their desire for calm and cozy streets. In parks, the preference was for tree species that provide shade and allow activities such as contemplation and rest. Streets, parking lots and areas in factories, as well as the city’s central areas, were mentioned as the most indicated places for tree planting. Most residents highlighted that the presence of trees influenced their decisions to reside in a given place, due to the physiological contribution of welfare that urban trees provide, to the mutating ornamentation of the neighborhood along the year, to the biodiversity and the mitigation of impacts caused by buildings, people and vehicles.

Cobo (1985) reports an experience of a pilot plan for urban afforestation of a peripheral neighborhood with scarce economical resources. In this case, the community’s interests prioritized the solution of other basic needs, such as provision of drinking water, street paving, health and educational services to the community and job opportunities. The plan became a project that integrated urban afforestation with other actions, such as improvements to family diets and population inclusion.

Aiming to know the population’s perception of urban afforestation in different neighborhoods, we carried out studies in the Brazilian cities of Passo Fundo, Rio Grande do Sul State and Lages, Santa Catarina State. After all, urban afforestation should not be concentrated exclusively to the trees and their management, but it should be planned and carried out taking into account residents’ needs. The community should actively participate from the start of the planning and the beginning of the project for urban afforestation to providing support and sustainability of the planned actions.

MATERIALS AND METHODS

The neighborhoods studied:

The socioeconomic standard of the population was the criterion used to choose the neighborhoods (one high-class neighborhood and another low-income neighborhood recently implemented). The sites chosen for the study represent the main characteristics of the neighborhoods and are consolidated, i.e., many of the lots have constructions and the sites display different conditions of urban vegetation.
The neighborhood Lucas Araujo in Passo Fundo City is situated near an old park of the city and has the greatest number of native species among the neighborhoods studied. The site chosen for the study in this case was the Saul Irineu Farina Street, between the Dona Geni da Cunha and São Lázaro streets. Figure 1 shows the urban afforestation on sidewalks and the conflicting situation with the electric wiring grid and streetlights.

The neighborhood Manoel Silva Corralo, also in the Passo Fundo City, is located in the eastern region of the city in a recently developed area. Its construction was started in 1966 as part of the Pró-Moradia Program (a public program designed to provide housing for low-income families in Brazil), in 1995, and currently houses 58 families. The area of this neighborhood chosen was Alberti R. Bagestan Street, between Giavarina Avenue and Caramuru Street (Figure 1b). There are few randomly planted trees on sidewalks without major conflicts with the urban infrastructure.

In Lages City, Santa Catarina State, Brazil, we analyzed the Frei Rogério neighborhood, which, according to IBGE (2000), concentrates the highest income per capita in the city. It is located in a noble area of the city and has abundant and permanent urban vegetation. The site chosen for the analysis was Colômbia Street, between Don Hostin Avenue and Augusto R. Rosa Street (Figure 2). Street trees are randomly planted on only one of the sidewalks. They are small seedlings of jacaranda, araucaria and other native species. It was not observed conflict with the electric wiring grid and streetlight.

The Graíha Azul neighborhood is situated in the western region of the city and was started in 1997 as part of the “Programa Habitar Brasil” (a housing program for low-income families in Brazil) with 30 families.

The objective of the program was to relocate low-income families that were living in risky areas of the city. The site chosen for the study was Alfeu...
Rodolfo da Silva Avenue, between Edson Carlos Leite and 8330 Streets. Figure 2 shows the scarce vegetation cover implemented next to the street. The sidewalks are 2.5 m wide (considered narrow), the street is large and the electric wiring grid is fixed only on one side of the street, adequate for planting small-size trees.

Figure 2. Views of the sites chosen for analysis, Lages City, Santa Catarina State, Brazil.

Methods

In this case study, we sued bibliographic review, observations and registers of situations of urban vegetation for the sites chosen and surveys on type and number of existing trees in the sites. The choice for the study areas was based on visits to the sites. In each visit, we chose 15 blocks randomly to carry out the inventory on existing vegetation and problems with urban infrastructure. The criteria used for analysis on urban afforestation involved the number of existing trees on sidewalks and medians, predominant species, conservation condition and conflict with electric wiring grid and streetlight.

The survey comprised four questions about the population’s opinion (satisfaction) regarding the existing urban vegetation. We interviewed 80% of local residents of each of the streets studied totaling 40 people in Passo Fundo City and 38 people in Lages City.

RESULTS AND DISCUSSION

In the site studied in the Lucas Araújo neighborhood in Passo Fundo City, Rio Grande do Sul State, the average of street trees per block was 5.6. Seventy-two trees were planted on medians and sidewalks on Scarpellini Ghezzi Avenue, representing an average of 17.75 trees per block. The Daltro Filho Street shows an average of 3.25 trees per block. The phytosanitary appearance is
good, without serious problems. The urban afforestation is good. Some conflicts with the electric grid and streetlight were due to lack of cooperative planning with the urban afforestation process before the implementation of the existing project.

In the Manoel da Silva Corralo neighborhood, vegetation average in the sites analyzed is 1.58 of trees per block, totaling only 0.66 trees per block on Giavarina Avenue. There is no planning for urban afforestation. Local residents carry out the planting on sidewalks, opting for fast-growing tree species to rapidly provide shade. Since the species planted are still under development, we did not observe inadequate pruning procedures or conflicts with urban infrastructure.

In the Manoel Frei Rogério neighborhood, in Lages City, the average of trees per block is 1.8. Some streets do not have any type of vegetation. In the site studied on Dom Daniel Hostin Avenue, we found 45 trees on the median and on sidewalks and identified 6 trees and 14 shrubs. Surprisingly, in this high-income neighborhood, urban vegetation is scarce and poorly managed.

Table 1. Opinion about the number street trees

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<tr>
<th>CITY</th>
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<tr>
<td>Neighborhood</td>
<td>Lucas Araújo</td>
<td>Manoel Corralo</td>
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<tr>
<td>Optimal</td>
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<td>Good</td>
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<td>Reasonable</td>
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<td>20%</td>
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<td>Poor</td>
<td>10%</td>
<td>80%</td>
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Regarding the number of trees planted in the blocks, the Lucas Araújo neighborhood showed the best performance, in Passo Fundo City, also known as “Lucas Araújo Forest”, due to its location and afforested area. This result could have been even better if there were adequate planning of urban afforestation. Also in Passo Fundo City, in the community garden Manoel da Silva Corralo, we found the worst situation, according to the residents interviewed, given that there are not many trees planted in the neighborhood and that the existing vegetation is not appropriate for on sidewalks, such as ligustros (*Ligustrum japonicum*) and cinamomos (*Melia azedarach*).

In Lages City, the Frei Rogério neighborhood showed the highest number of trees per each block studied; however, the number was small. Similar to the neighborhood for popular housing program in Passo Fundo City, the Gralha Azul neighborhood in Lages City showed the worst condition in the city, given that, differently from the others, it does not have any type of arboreal vegetation on sidewalks. Despite that, some residents show indifference to lack of urban afforestation. In this aspect, values are smaller in popular housing programs, given that the existing afforestation is inferior to that in high-class neighborhood. The averages in Passo Fundo City were larger, because most residents responded positively, compared to residents in Lages City, mainly in the Lucas Araújo neighborhood, which showed the best average in this respect. In Lages City, the situation found was worse, because in the Gralha Azul neighborhood, there is not arboreal vegetation on sidewalks.
In the choice of tree species for urban afforestation, the following aspects should be taken into account: capacity for adaptation, for survival and development in the planting site. Only in the high-class neighborhoods of both cities, some residents (between 20 and 30%) stated that they knew what features are indicated for tree planting on sidewalks.

In the city of Lages, more residents desired to have more trees planted on sidewalks than residents in Passo Fundo City. This perception suggests that the population wanted to replicate the privileged situation in the Lucas Araújo neighborhood, which has a considerable number of trees planted already. In the Manoel da Silva Corralo neighborhood, 30% of residents were satisfied with the existing urban afforestation, which is considered insufficient. In Lages City, in the Gralha Azul neighborhood, 80% of the residents interviewed wanted more street trees and 20% believed that they were not necessary.

In the Frei Rogério neighborhood, 70% of the residents wanted more street trees and 30% claimed that they are satisfied with the existing urban vegetation. In both cases, most residents interviewed are in favor of more trees planted on streets, regardless of the social class.

In Passo Fundo City, the Lucas Araújo neighborhood stands out because of its vegetation cover. In the Manoel da Silva Corralo neighborhood, the inexistence of urban afforestation turns it into a “massive and lifeless” site. The simple implementation of urban afforestation would make the neighborhood more harmonious and environmentally pleasant, with milder temperatures in the summer. The existence of urban afforestation is not adequate and, soon, it will conflict with the electric wiring grid and streetlight.

In Lages City, the Frei Rogério neighborhood, considered as one of the poorest ones in the city, urban afforestation is precarious. The opinion of the residents is that the presence of trees makes the neighborhood more pleasant and environmentally friendly.

Table 4. Opinion about the location of street trees

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population interviewed shows that an urban afforestation project should be implemented to the city with great potential for success.

Figure 3. Average concepts of neighborhoods analyzed

CONCLUSION

The results allowed to observe that the socioeconomic condition of the population is not directly related to their perception of urban afforestation on streets and avenues in the Brazilian cities of Passo Fundo, Rio Grande do Sul State, and Lages, in Santa Catarina State. Although lifestyles and economic possibilities are different, residents’ perception or interest for urban afforestation is similar. In the case of Lages City, 70% of the residents from the Frei Rogério neighborhood and 80% in the Gralha Azul neighborhood showed interest in urban afforestation, only 30% and 20%, respectively, are satisfied and believe that it is unnecessary to plant more trees. In both cases, most people interviewed are in favor of planting more trees on the streets, regardless of the social class. The opportunity and convenience of implementing an urban afforestation plan to these cities is great, in which the interest in the subject could be used as an element to achieve success in the project.

In the case of Passo Fundo City, opinions diverge. Residents of the Lucas Araújo neighborhood, which is the most and best afforested site, are not interested in the planting of more trees, which shows their satisfaction with the current scenario, not an opposing view to afforestation. Regarding the Manoel da Silva Corralo neighborhood, which lacks vegetation cover, 30% of the residents are satisfied with the existing urban afforestation in the site. Other concerns seem to be a priority for these residents of the public housing program.

Satisfaction and indifference mark the situation found the neighborhoods studied in Passo Fundo City. A plan for urban afforestation, in this scenario, would require a socio-educational Project to change the current situation. Only the Municipal
Complementary Law no 86/2000, which institutionalized the Municipal Code for Urban Afforestation aiming to systematize the norms regarding urban afforestation in public areas, is not enough. Due to its condition as a critical element, the public has to develop more awareness and comprehension and be willing to support urban afforestation and a complete management of the ecosystem. The population needs to take a pro-active attitude and means of communication and marketing should be used all the time. Sustainable urban silviculture is the key to save our cities.

REFERENCES


