

Environmental Green Area Recovery

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Abstract: Green areas have been historically managed in an inappropriate manner towards their purposes of urban as well as environmental character, undermining the biota. These areas are typically governed by development plans which are proposed by the municipality. However, proposals are also taken by the community to competent bodies. Then, it was tried to fit the green area of the University City Lot - LCU in Passo Fundo to its natural purpose: preservation area for parks, then the community association was included in the context together with professors of the engineering course of Passo Fundo University. Therefore, the objective of this work was to develop the accomplishment of improvements of the LCU green area, according to the laws that govern the preservation of the environment and community as needed. With these actions, the green area must have a social function for the community, which now operates actively for preserving the site.

Keywords: Urbanization, Environmental Degradation, Environmental Preservation, Community, Environmental Education

Resumen: Las áreas verdes históricamente vienen siendo manejadas de forma inadecuada a sus propósitos, tanto de carácter urbano cuanto ambiental, comprometiendo el medio biótico. Estas áreas normalmente son regidas por planes de desarrollo propuestos por las municipalidades. Entretanto, propuestas también son llevadas por la comunidad a los órganos competentes. Se buscó así, adecuar el área verde de la Parcelación Ciudad Universitaria – PCU, en la ciudad de Passo Fundo, a su propósito natural: área de preservación con fines de parque, para tanto, se accionó la población en el contexto de la disertación de maestría del curso de Ingeniería de la Universidad de Passo Fundo. De este modo, el presente trabajo fue desarrollado como subsidio para la realización de mejoras del área verde del PCU, adentro de lo que rigen las leyes de preservación ambiental y conforme la necesidad de la comunidad. Con ésas acciones, el área verde pasó a tener una función social para la comunidad, la cual, de ahora en adelante, actúa activamente en la preservación del local.

Palabras clave: Urbanización, Degradación Ambiental, Preservación Ambiental, Comunidad, Educación ambiental

1. Introduction

The uncontrolled growth of urban centers affects, negatively, the environment and population in the city. This is what happens in the community of the “University City Lot”, where there is a green area, which was not well managed in the past. The green area was improperly managed in its urban as well as in its environmental function. Through the community’s mobilization, proposals were presented to bodies like the Municipality and Public Ministry in order to turn the green area into a type of urban park, which would preserve the environment and would also serve as a recreation area for the community. Therefore, the objective of this work was developed to characterize and analyse the area and provide technical subsidies to the community in its planning and improvement, following environmental preservation laws to meet

its needs. This work is an environmental structural analysis of the green area of the University City Lot – Passo Fundo, included in the research line Society Relationship – nature – environmental impact.

1.1 Urbanization and its interference in environmental issues

Brazilian cities formation has been building a scenario of contrasts of large cities in the third world since 1950. In this sense, the creation of the majority of municipalities ended up not contributing with the territory organization model and urban management traditionally used, and it showed to be inadequate, since, according to [1], “the result was the appearance of cities without infra-structure and availability of urban services



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which were able to fit the growth provoked by the population that migrated to the cities” (2005). However, environmental impacts, the water issue mainly, are different among developed and

developing countries. The forms of planning the urban space or even not planning them, are also different, then environmental impacts are also different. This can be identified in Table 1.

Urban Infra-structure	Developed countries	Brazil
Water Supply	Attended, with total coverage.	Great part was attended, tendency to reduce the availability due to contamination, great loss in the network.
Sanitation	Almost total coverage.	Lack of network and treatment stations; the existens tones are not able to collect sewage as designed.
Urbana Drainage	Quantitative aspects controlled; development of investments to control water quality aspects.	Great flooding due to the increase of flooding; Control that aggravates flooding through canalization; Water quality aspects were not even identified.
Riverside flooding	Non-structural control measures as security and flood zoning.	Great prejudice because of the lack of control policies.

Table 1. Comparison of water aspects in urban areas

Environmental degradation nowadays is related to soil use and occupation, since the occupation and managing ways cause the type and degree of impact, which influence the environment differently. Therefore, soil use diversifies from its occupation in different social categories, then it arises the need for considering politic-economic, socio-cultural and biotic factors in the anlysis of environmental degradation processes [2]

Later in century XXI, people shall live in areas that will be separated by green parks and interconnected by high-tech trasportation systems like modern trains. New clean technologies will be used. Yet, social and ecological equality policies shall be increasingly more researched. Consequentely, cities will change from focal areas of great social, poltical, economic and ecological disturbance to areas of cultural growth for sharing ecological as well as technological ideas. This seems to be the only way we can survive in the future, thus, “[...] management is overcoming problems, social injuries mainly, and the improvement in life quality. Urban planning and management are anything but strategies of urban development, fed by basic social, empiric as well as theoretical research” [3].

If natural processes were recognized and used, they would represent a powerful resource for the construction of a urban sustainable habitat, but when they are ignored they increase problems that damage the cities like mudslides, water and air pollution, among others [4].

The cities growth generally increases environmental problems. Injuries to the environment occur because of many factors related to the uncontrolled and inadequate soil use and

occupation, urban net growth without an adequate support of infra-structure resources and to the urban expansion. Then, improper areas are occupied by the poor population, or even by real state enterprises, damaging environmental resources, with prejudice for society as a whole and for those who have to face this situation day by day mainly, leading to the lack of an adequate landscape treatment, [5].

In order to take advantage from the natural environmet of the city, it is important to obtain a new attitude towards the environment built. According to [3] “the city needs to be recognized as part of the nature and be designed in accordance with it. [...] Nature in the city needs to be grown as a garden, instead of being ignored”. So, people must make their part with relation to preservation of green areas in the cities.

The city may be understood as an ecosystem, in its wide sense, an environmental unit, in which all elements and processes of the environment are inter-related and inter-dependent, in such a manner that a change in one of them would result in alterations in other components. Without embargo, there is also ideological differences and conflicts of interest which confront with environmental ideas, reflecting inside the urban scenario [6]

Large urban settelments concentrate the greatest environmental problems as well, like air, noise and water pollution; degradation of natural resources; social desintegration; unemplyment; loss of cultural identity and economic productivity. For many times, the forms of soil occupation, green and leisure areas, management of risk areas, sanitation treatment and the final destiny of the waste collected are not treated with priority, thus “The

constitution made the Master Plan compulsory for municipalities with more than 20 thousand inhabitants, defining as “basic instrument of the development policy and urban expansion”, mean of expression of “important demands of the city plan”, and as parameter to guarantee the social function of the urban property” [4].

The city is formed in such a manner that human being organized themselves to live as a society and provide their needs. Aggressions to the environment, caused by human occupation, suggest the need for alternatives which minimize these actions and promote integration of people with the nature. It is necessary to stop destructing the nature, thus it brings many typical problems of large cities, but also damage small-sized cities, like flood, mudslides, pollution, among others. In this context, “the environmental degradation, in the city or field, is an old problem which also existed in the humankind history”.[...] The worst environmental problems are the effect of urbanization on the ecosystems, provoking the contamination of natural resources, water and air mainly [4].

“The existence of watersprings also provides conditions to the growth of the city. Streams are not obstacles to urban occupation because they can be canalized and can even disappear with the city” [7].

According to [7], in order to “build streets and lots division, all vegetation is removed from the local, but this provokes the disappearance of the fauna”.

The local researched presents hydro natural resources, owning three watersprings, thus it is said in [8] “you can begin demarcation of permanent preservation areas by the edge of the rivers. All extension along with the rivers is a permanent preservation area”.

In century XXI, water became a concern, as it is a renewable natural resource. With relation to drinking water, its consumption has increased and sanitation does not always reach all residences. Sewage is directed to streams, this way polluting them.

According to [9] “water contamination by urban sewage results in very serious problems: contamination by bacteria that cause diseases and contamination by organic substances that can be transformed by microorganisms”.

We can say that “water is a very important element for all forms of life in Earth” [9]. Also, there are some authors like [10], who speak about the importance of water, they say that “water is life, and that is why it cannot be replaced”.

In the green area of the University City Lot, it is possible to observe the richness of hydro resources, where three watersprings are found: the first one was canalized; the second and the third one are degraded because of the ciliar forest and there are small remaining secondary forest. However, “with the process of city expansion and the incorporation

of new spaces for building, nature has increasingly changed in the urban environment” [11].

1.2 Objectives of the Research

The objectives of the research were proposals to the community of the LCU:

- a) Analyzing the vegetation and the soil of the area;
- b) Diagnosing the social issue and the dwellings’ perception;
- c) Proposing measures for the environment recuperation of the area.

Therefore, the research would never be possible without the community’s support with respect to the fulfillment of proposals for the improvement of the green area, since it is seen as something which will improve the dwellings’ life quality.

2. Materials and Methods

The green area has around 2 ha and it is located in University City Lot – LCU, in Petrópolis District, in the city of Passo Fundo – RS. This area is nowadays occupied by a traditional society and by the Civil Police. The actions of the community could be seen during 2005-2007 in this area. The methodology used were actions like:

- Bibliographic survey on laws and authors that show tendencies of the urbana area use, by relating the sustainability issue in the case study of the LCU;
- Area survey, with location of data towards vegetation;
- Water and soil analysis to know their quality level.

Water analysis was achieved between the three watersprings at the site to know the level of biological and microbiological pollution. In the soil, samples were collected in several points and different depths, weeds were removed from the collection, around 20cm of soil to put into a recipient and mixed with other similar collections to analyse them. Later, the analysis of 20 to 40cm depth was achieved, also in different sites to obtain the soil level acidity.

- Information on the dwellings’ socio-economic life and their perception on the environment were surveyed through questionnaires within the green area context. The results were analysed and tabulated to verify the main problems and indicate techniques of management and restauration of the area.
- 500 native seedlings were planted in order to provide the original landscape to the area, recovering watersprings, soil and vegetation.
- Provide the population with a recreation area for their life quality.

2.1 Characterization and location of Passo Fundo

The uncontrolled growth of urban population density in rural areas survived to great rural producers as for economic terms. Therefore, there was a great search for land in 1960, which led to an economic strengthening in the rural area, that is, “the search of capitalists for land in 1960 shows an increase of new capitalists in Passo Fundo” [12]. Consequently, unemployment arose because of innovations and capitalism, if we relate the system to the beginning of century XXI. Passo Fundo is a city that searches for obtaining benefits, according to authors [13], they emphasize that Passo Fundo is correct: “[...] to provide support to production and obtain benefits and supremacy of the market demands the companies develop productive methods that use technology, research and

sofisticated management, which may cause the firing of employees.”

The city of Passo Fundo, which is located in the North of Rio Grande do Sul state, between geographical coordinates 28°07' and 28°25' latitude South and 52°17' and 52°41' of West longitude, with a territorial area of 754,40km², has Pontão and Coxilha as its boundaries in the North, Carazinho and Santo Antônio do Planalto in the West; Ernestina and Marau in the South, and Mato Castellano in the East (Figure 1).

Passo Fundo is located in Planalto Rio-Grandense, at 709m altitude in the center of the city, where it is crossed by Coxilha Grande do Albardão, with “coxilhas” and “chapadões”, with decreasing declivity to the east-west, which form the division between the watersheds of rivers Uruguay and Jacuí [14].

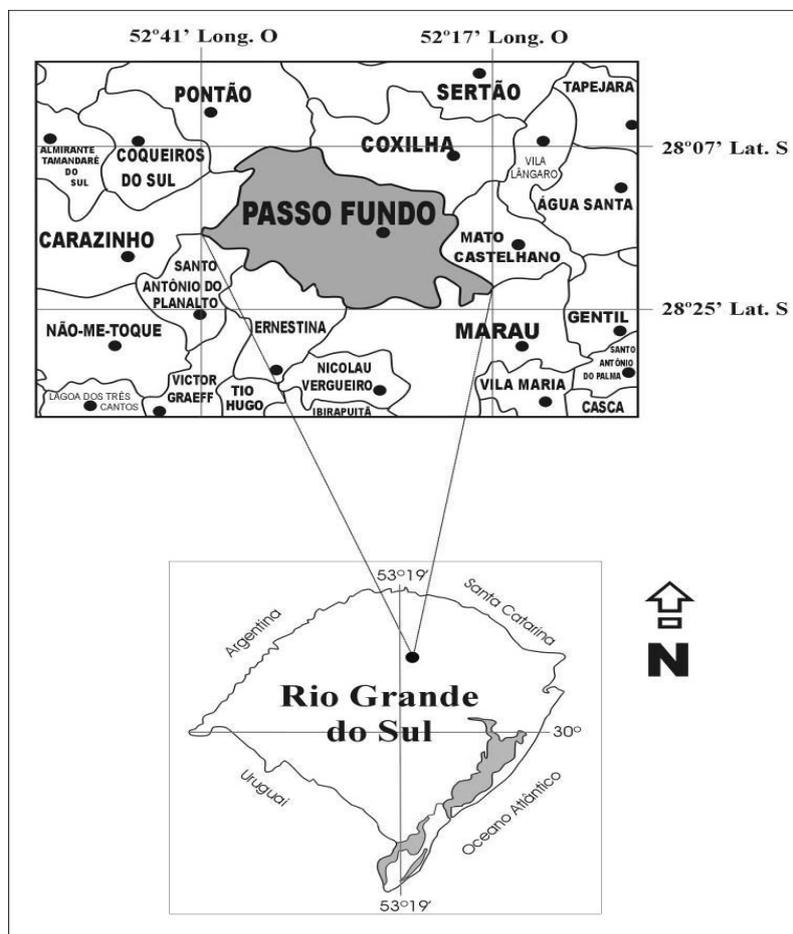


Figure 1. Map of the location of Passo Fundo.

The city of Passo Fundo, known as the capital of Planalto Médio, is an important city for all North Region of Rio Grande do Sul, where the largest city has 168.440 inhabitants, according to Census 2000 – IBGE, which demographic density is about 220 hab/km². It is located at 687 m above sea level, its temperature is pleasant, where the yearly mean

temperature is 17.5 °C and the hottest mean temperature in January is 28.3°C, and the coldest mean temperature is 8.9°C.

It can be said that the capitalist system brought chaos to urban area. We must mention authors like [15] who say: “there were some great population concentrations in some periods towards urban axes,

resulting from the marginalization of a human mass that are comprised of descendents of slaves, natives, peones de estancia, small producers and those who missed their function in the rural area.” La geomorphology is derivates from deep and well drained lying basalts by the hydro network of River Passo Fundo, Taquari, Río Jacuí, da Várzea, Stream Miranda, Stream Pinheirinho, Stream Passo do Herval, Stream Chifroso, Stream Conceição, Stream Engenho Velho and Stream Santo Antonio. The soil belong to red latossolos with clayey textura. Landform is wavy, which is called coxilhas in the region. The weather is subtropical tempered and humid type Cfa de Copen, with well distributed rainfall throughout the year.

3. Results and Discussions

3.1 The green area of the University City Lot and the analysis of the environmental degradation

Nearly 33 families live in the University City Lot, representing several professions and social classes: farmers, micro-businessmen, professors, public employees of UPF, as well as self-employed and students. The Lot is comprised of six streets, where two of them are the most important ones because there is too much traffic, since they provide access to UPF. The other ones are transversal and there is not too much traffic.

The green are of the University Lot has 17834 m2 and it is located between Brazil Av. East and BR 285; next to the access to Passo Fundo University and to the Northwest, it borders UPF. In Figure 2, we have a general panoram of the green area (the circled area).



Figure 2. Detail of the area mentioned in the proposal of the Master Plan and Integrated development of Passo Fundo, 2005.

With relation to characteristics of the green area of the University Lot, the occupation of the territory is not in accordance with the type of the area. There are buildings next to watersprings; landfills; area without vegetation with exotic species: eucaliptus and pinus, besides the presence of watersprings and primary thalwegs with problems (Figure 2), like inadequate treatment to the watersprings (watersprings canalized or grounded) and watersprings pollution. Therefore, we can still emphasize the great lack of respect towards water preservation laws, according to [16].

The Lot, although it is located in one important area of Passo Fundo city, presents problems in its infrastructure and cannot count on the support from the Public Power. Following are some problems:

- Lack of sidewalks, street curbs and sidewalks in almost all streets;
- Intense traffic of vehicles and trucks (Access

to BR 285, UPF and Brazil Av.);

- Littering in all streets and green area of the Lot;
- Wastelands, which objective is the estate speculation only;
- Lack of iddle and recreation areas for the community;
- Green area which preservation laws are not followed;
- Presence of unfinished buildings;
- Landfill with por soil from horizon C;
- Disregard with relation to watersprings in the area.

The soil to the west of the area is composed of Latossolos Brunos and Chernossolos. To the east and north of the area, the soil is old landfill with horizon C, that is, soil with basal rock characteristics, they are chemically and physically poor. A summary of the chemical and physical

characteristics is described in Table 1.

Table 1. Chemical and Physical characteristics of the soil, in two depths, in the north and east zones of the green area of the University City Lot – Passo Fundo.

Sample	Depth	pH		Al	Ca	Mg	K	P	Apparent Density
		water	SMP						
Zone 2a	0 – 20	5.3	5.7	3.1	1.5	1.9	4.6	2.0	1.50
Zone 2a	20 – 40	5.2	5.8	3.4	1.3	1.8	4.6	2.0	1.46
Zone 2b	0 – 20	5.4	6.2	1.8	2.8	1.9	4.6	2.0	1.84
Zone 2b	20 – 40	5,4	5.6	1.3	2.1	1.9	4.6	2.0	1.50

Zone 2a and 2b are located to west and east, respectively.

These soils are from an extra area, built through landfills, that is why it is necessary to improve them by including native plants which are adopted according to description mentioned above. Native species produce vegetal matter, which will improve the soil through the increase of organic carbon to it. This process will immobilize organic matter, improving the soil chemical and physical properties, like the retention capacity of cations and water. The process of recuperation is expected to be fast, since large-sized native plants, like *Luehea grandiflora* Mart. açoita-cavalos (*Luehea divaricata*), *prunus luisitanica*, cedro (*cedrela fissilis* Vel), grápia (*apuleia leiocarpa*), ipê-roxo (*Tabebuia impetiginosa*) and ipê-amarelo (*T. serratifolia*), *Myrcarpus frondosus* Allemão (*cabreúva*), *Piptadenia colubrina* Benth (*angico*) are the most susceptible to soil conditions. A hole was filled with organic matter at at the moment of planting the seedlings.

It is recommended some post-planting practices like irrigation and that organic matter is periodically placed in the hole, in order to guarantee the development of the seedlings. Without embargo, irrigation, in this project, can not be achieved because of the infra-structure problems of the area. The largest challenge of this area is to provide a soil with minimum conditions so that the seedlings of native plants root. It is important that these plants develop well and fast, so that they do not become weak because of exotic species. The green area of the University City Lot has been used for others' benefits instead of benefiting its dwellings. Its original version is type urban park, emphasizing the permanent preservation of its resources. Therefore, the area was provided to entities in order to build social headquarters. As a result of this old policy, several problems arose in the area, affecting directly and indirectly all community. The direct consequences were, among others, the reduction of areas for recreation, and the reduction in the dwellings' quality of life. Indirectly, the ties among dwellings was not favored due to the construction

of social headquarters of entities which do not have any bond with the community.

This situation, despite being very common in Brazilian cities, motivated the Association of dwellings of the University City Lot to require that the area was integrated to the Lot and to the community.

The lack of a recreation area for the community, plus the incorrect use of the green area, originally University City Lot, motivated all community and consequently, our intervention through this project. This Project is in accordance with the Master Plan of Integrated Development of the Municipality of Passo Fundo with relation to article 21, which says: "It is comprised of guidelines for the management of the landscape heritage of Passo Fundo", item:

- I. Preservation of spaces of relevant landscape and natural potential because of its importance for life quality and for activities related to leisure;
- II. Preservation and recuperation of the ciliar forest along the rivers and streams;
- III. Recuperation of degraded and preservation areas;
- IV. Environmental education, which focus is the environment protection.

Yet, the project was presented to an audience, where the Mayor of Passo Fundo, Mr. Airton Dipp was present.

Following are the objectives of the project:

- a) Protecting the watersprings in the area;
- b) Replanting the areas and rebuilding the soil of disturbed land;
- c) Transforming the area into a park for an ecological recreation, and where the community can visit and develop a feeling of responsibility with the natural and social heritage of the city;
- d) Involve the community, turning it aware of the environmental issues and preservation of its habitat;
- e) Involve graduate students of UPF in research and extension actions.

3.2 Watersprings and the recuperation model of the

native vegetation applied to the local

With relation to the watersprings, they were not well preserved and/or grounded (Figure 3). The watersprings which had been through the worst

situation is the first (to the north), which was left bare, without any ciliar vegetation, and the third one (to the south = spring 1), that was grounded, placing a tire only.



Figure 3. Detail of the state of a waterspring in the area of the University City Lot – Passo Fundo.

The following is predicted to the area where the waterspring is found:

- Cleaning of all material extrinsic to the area natural condition, including tins, plastic and waste.
- Removal of the exotic vegetation, like pinus and eucaliptus, species that interfere in the growth and development of native seedlings implanted. This action will also be explored for all total area, whether it is necessary.
- Soil revegetation in a ray of 50m from the waterspring; law: in the watersprings, the so called “Olho d’água”, whatever the topographic situation is, it is a minimum ray of 50m width; (Alteration provided by law nº 7.803 of 18.7.1989). The State Forest Code establishes in Article 2nd - It is considered permanent preservation, under this law, the forests and other form of natural vegetation

located: in the watersprings, even in those called “olho d’água”, regardless the topographic situation;

- Monitoring water quality from the organoleptic, chemical and microbiological point of view. This action will depend on the philanthropy of competent bodies to the fulfillment of the analysis;
- The choice of the species used will be in accordance with the classification with relation to growth and ecological habit (Table 2), and as for the availability of donations of seedlings and seeds. The herbaceous native species and forage will be implemented in order to cover the soil. The arboreous plants will be implanted so that in the future they cover the soil through their crown.

Table 2. Characteristics of different ecological groups that will be implemented in the area of the University City Lot in Passo Fundo.

Characteristic	Ecological Group		
	Pioneer	Secondary	Climax
Growth	Very fast	From fast to medium	Slow or very slow
Wood	Very light	Intermediate	Hard and heavy
Tolerance to shadow	Intolerant	Intolerant to tolerant in its young stage	Tolerant
Regeneration	Seeding bank	Seedlings Bank	Seedlings Bank
Dispersal of seedlings	Wide- animals with. of disp.; Wind at long dist.	Restr.: fruit Wide: animals; Wind	Fruits fall; Animals
Size of seeds and fruit scattered	Small	From medium to small	Large and Heavy
Age of the 1st reproduction	Premature: from 1 to 5 years	From 5 to 20 years	Late
Dependence of polinators	Baja	High	High
Time of life	Very short: 10 years	Wide: from 10 to 100 years	Very wide
Example	Aroeira, cinammon, timbó (fabaceae), chá-de-bugre	Canafistula, angico, açoita-cavalo, timbaúva	Cedro, grápia, ipê amarelo e roxo, cabriúva

That area has been through a process of abandonment in the last few years, where landfills and the supply of anemometric seeds transformed the vegetation, remaining exotic species mainly, with infectious characteristics. The plants mentioned above are characteristic from abandoned areas and came from these areas due to the arrival of the seeds brought by birds, or even by air, in the grounded land.

Therefore, the area presents native reminiscent solid vegetation, around watersprings mainly, whose function is ciliar forest. Without embargo, these solids circle the watersprings along some meters and suffer ecological pressure by the exotic species mentioned.

Then, the intervention by men through the handling of exotic and native species is necessary. Elimination of exotic species, more rustic and aggressive is a recommended practice. The cleaning of these species is predicted in this project. This practice aims at reverting the relationship of strength in the plants inheritance, to benefit current native species which will be implanted through seedlings or artificial resowing.

Therefore, beds of native plants may spread easier, besides allowing germination of native species seedlings like erva mate, cinammon, aroeira, among others that make part of the bed. In a subsequent stage, the preparation of the soil and the inclusion of native species will be achieved.

The model that intercalates pioneering, secondary and climatic species in a closed space of 4x4 meters was adopted in this project.

This method is applied successfully in small areas. It is a very dense model, comprising 4000 plants/ha. Among the seedlings planted on the lines, stoloniferous grass plants like Paspalum notatum or grass paspalum notatum will be planted. This practice will help in the preservation and cleaning of the bed lines without germination of exotic infecting species.

With respect to the dwellings' will, which is to have a recreation area in the green area of the lot, they also want rings for practicing sports, benches to sit under the shadows of the trees, allowing their coexistence with neighbors and a park for their children. In this sense, a Project of recuperation of the area was fulfilled, including a landscape pre-project to revitalize the area.

Since the dwellings appear to be interested in a green area to organize the park they are also committed with keeping the maintenance of it, and this is an action that leads to the development of the lot. The objectives of the project "Green area" lead to the recovery of the area, then reaching the dwellings' purpose.

In Figure 4, the previous and future situation of the implementation of the Project in the Green area is explained.

With respect to the actions for the improvement and preservation of the green area of the University City Lot, we may mention:

- Creation of green area together with the population of the lot;
- Protection of watersprings;
- Reforestation of areas adjacent to watersprings

with native forest species: Corticeiras (*Erythrina crista-galli* L.), açoita-cavalos (*Luehea divaricata*), pitangas (cherries), angicos (Benth), ipes ipê-roxo (*Tabebuia impetiginosa*) and ipê-amarelo (*T. serratifolia*), guabiroba (*Campomanesia xanthocarpa* O. Berg (Myrtaceae), bracatinga (pionera), araucaria pine forest, cedro (*cedrela fissilis*);

- Creation of a recreation area for adults and children;
- Cancha de fútbol y bocha;
- Huerta comunitaria;
- Public lighting;
- Creation of paths for hiking;
- Among others.

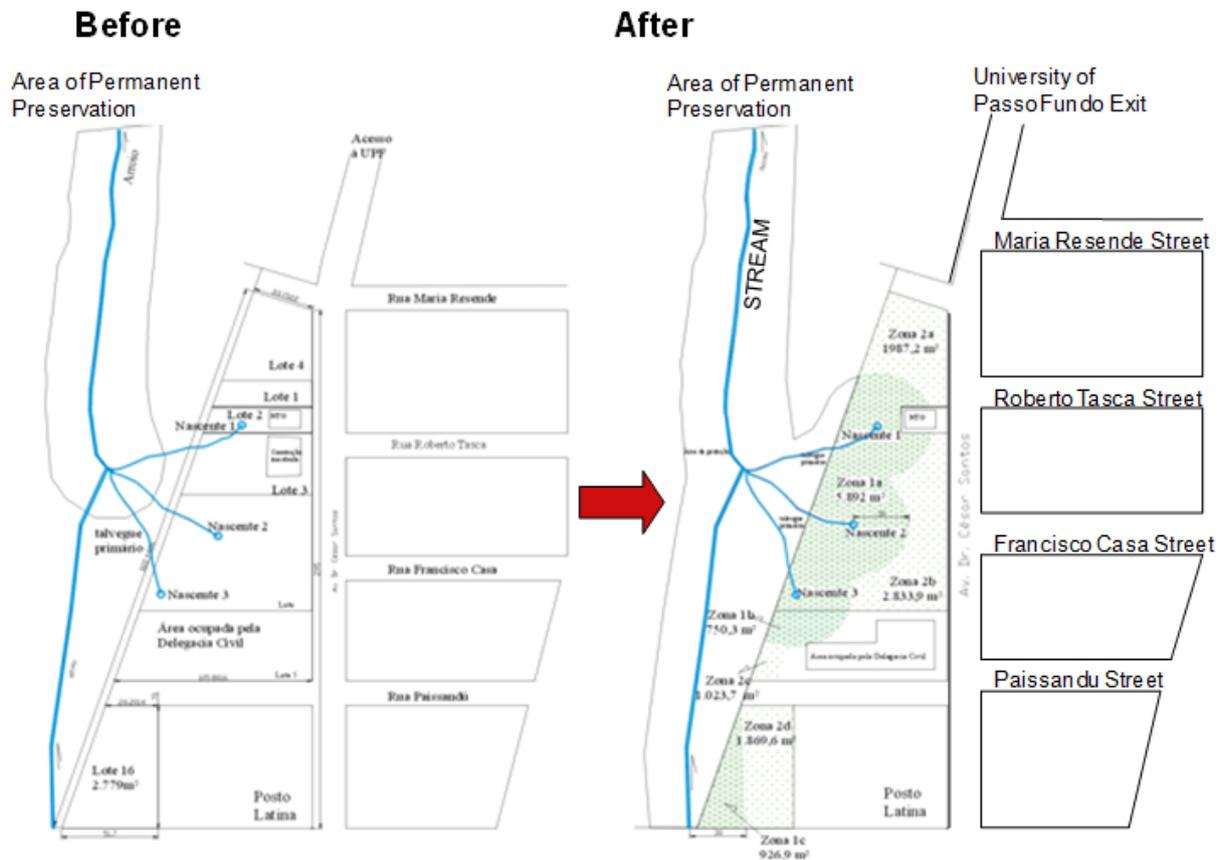


Figure 4. Previous and future situation to the implantation of the Project in the Green Area.

4. Final Considerations

The objective of the work is to evaluate and present the current situation of the Green Area of the University City in Passo Fundo, as well as to present suggestions for the improvement of urban and environmental issues.

Then, it was observed that the dwellings of the Lot have the need for taking care of the green area and all public or private space, thus all interviewed people are committed in helping so that the place where they live in is more environmentally more adequate and beautiful.

After the achievement of the analysis of all data, it was observed that the community was organized and developed their sense of citizenship in all process of accomplishment of the project, thus the vegetation of the area was revitalized by including native species; the watersprings were protected, these measure were taking by implementing the

environmental legislation. Part of the area was used for recreation; yet, the community recognized the need for improvements which were presented during the development of the project.

The dwellings are medium class, where there is a concern with relation to the access to a basic infrastructure of a urban space, but as the lot is distant from downtown, it was observed that the Public Power not always fulfills its role, which is to take into consideration the dwellings welfare first, since there are complaints towards the lack of cleaning in the streets and problems with sewage.

The University of Passo Fundo, through the Agronomy and Veterinary Colleges (FAMV), has benefiting and being benefited by the improvements in the lot, thus the area makes part of the access to UPF. Therefore, there is interest by FAMV in donating seedlings of trees and also that the

students help with the planning and fulfillment of projects, so that there is a significant increase in dwellings' life quality.

The board of professors has found that the objectives proposed have advanced. It is important to mention that the community help with the improvements implemented in the area. In this context, the action of the geographer was very important in the different stages of the use of the territory in urban environments.

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