

por uma relação urbano-rural
ambiental na metrópole:
didática e ações
towards an urban/rural
environmental relationship in the
metropolis: about teaching and
actions

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Abstract

This article presents the concepts, objectives, methodology and the results of a teaching experience realized in Final Graduation Works during long period, on the Faculty of Architecture and Urbanism at the Catholic University of Campinas, whose concern is guided by no dissociation between teaching-research-extension. Through community participation and collaboration, the processes are articulated in understanding assumptions about voluntary extension and the implementation of concrete actions in socio-spatial fragile territories devoid of basic infrastructure and living conditions, the metropolitan peripheral fronds continuous to rural areas and environmental preservation tensing the relations man x man and man x nature in search of new paradigms.

Keywords: Teaching, Project, Spatial social fragility, Environment, Participation

1 In search of an academic method of participative collaboration

In our view, the fundamental premise of searching for an academic method of participatory collaboration presupposes the dissolution of walls that separate the academic activity from the territories on which it necessarily must look over and interact. It also intends to intensify the hypothesis of the University's mission as a hub for knowledge and to pulverize the production of this knowledge in order to understand an arc of amplitude capable of gathering and sheltering the diversity of the wisdom – erudite or popular – in its nuances and specificities, directed for solidarity, social justice, civic and environmental commitment. In this sense it seems opportune to divulge an academic experience, registered here in its questions and attempts of answers

in act and discourse, ruled by the definition of architecture and urbanism as a social function and, mainly, connected to the issues of urgency.

2 Questions to be made: what, why, whom, where, how, how, when?

We present the conceptualization, objectives, methodology and the results of a didactic experiment carried out in undergraduate final assignments – (TFGs in Portuguese) – at the Architecture and Urbanism Undergraduation Course at the Pontifical University of Campinas, based on premises established by the teachers, authors of this article. Its gradual revision and improvement have been structured from until 2012 to the present date, and whose continuity has organically generated a diversity of solidarity bonds and contribution with the local communities involved, as well as one of the authors' Research Project, in realization in the Architecture and Urbanism Graduation Program (Luz, 2018).

The Course's Program establishes the final stage of student training in two phases – the Pré-TFG and the TFG –, disciplines carried out in two consecutive semesters, assuming the modulation of 8 students to each guiding teacher, having as content in the first phase the elaboration of an urban project as part of a group and, in the second phase, the execution of individual Architecture Projects, subordinated to the urban project perspectives.

The conceptual and methodological construction and the reasons for the chosen form of the orientation of these assignments were progressively built up from the formulations and the experiences realized. The Urban Project produces definitions and solutions presented by analyzes and justifications, guidelines and project proposals for the various territorial scales, such as systems of different natures of the broad territory in the national, metropolitan, regional and local scopes. The congruence and articulation between the scales of coverage culminate with an Urban Design of more detailed cut, with a local exemplarity power, between 10 and 20 hectares. It was understood that the Urban Project could be carried out in a single territory, bringing together the two teams of students through simultaneous co-tutoring of both advisors, enhancing the reach and achieving more consistent results by organizing the assignments in thematic subgroups and with general meetings realized for the discussions and collective decisions. The individual Architecture Projects, although in a direct and daily responsibility of teacher's orientation, count on the combined co-orientation of both with rhythms of need or the deepening for the collective construction of knowledge.

As a training of the architect and city planner conscious of its socially necessary function, the idea of authorship is dissolved as a individual belonging and reinforces the necessary common commitment, where the territory's protagonism as the main character is superior to the desire for individual prominence or voluntarism.

The methodology fundamentals and guiding principles were gradually consolidated, over the years of the activity, namely:

PREMISE 0: It is pretended that the academic triad teaching-research-extension are inseparable in any process of knowledge, disciplinary activity or action. It is considered, therefore, that the final stage of the student's formation is the realization of a comprehensive experimental experience of these three conjugated instances, where, although being a characteristic activity of design, in a similar way there is no dichotomy between praxis and theory (Fabiano Jr. and Luz, 2014, 2015, 2016, 2017, 2017a). Therefore, if a project is a conceptual and practical elaboration of proposals for action that can be realized in the world, let's get closer to this world, as it will be explained in the subsequent premises.

PREMISE 1: Any activity, therefore, is considered a project, be it a research, theorization or a practical proposition. Thus, the initial surveys are already the project, since research, hypothesis, thesis, points of view or conclusions are not excluded in different watertight working times. Under the responsibility of subgroups, the discussions and the synthesis of the systems are done collectively, from the readings, to the prognoses and propositions, with the purpose of understanding the territory as a single being, a complex organism of systems and hierarchies where tensions, fragilities and potentialities arise. All of them perform the necessary diving in situ, in loco, and comprising the territory – that we know to be in a socio-spatial and environmental crisis – as a physical entity and a biological habitat space, of which we are part as persons.

PREMISE 2: the constant and fundamental theme focuses on the search for new paradigms in urban/rural/environmental relations from where the question "what is/can be the city?" emerges. City as law (Lefebvre, 2016), as a conviviality, as celebration, living and fulfillment, survival, pact of human solidarity, public entity, polis, civitas. The dissolution of dichotomies is sought (city/field, city/environment, countryside/environment), since everything – the whole – must be preserved, in accordance with the conflicting visions of what is development and whose choices emerge from the best possibility of lucidity about the unbalance of means and modes of the present civilization (Davis, 2006; Georgescu-Roegen, 2012; Marques, 2016).

PREMISE 3: we necessarily elect metropolitan areas with exclusion and socio-spatial fragility, in São Paulo, where, simultaneously, there is a infrastructure of regional or metropolitan impact such as the presence of the "Rodoanel", highways, railroads, supply dams, landfills, airports, whose tensions act directly or indirectly at local level, with the evident paradox of their scarcity. From this election comes the reflection on the city's definition as an "unreached right". The minimum conditions supported by constitutional law – the quality of housing not restricted to the residential accommodation but including infrastructure, equipment, services, public space and the environment, comprising them as the habitat -, that is added to the investigation of the opportunity to review the understanding of metropolitan fringes and their urban interstices from the rural point of view (Arantes, Maricato and Vainer, 2000; Caldeira, 2000; Rolnik, 2007; Fabiano Jr. and Luz, 2014, 2015, 2016, 2017, 2017a; Maricato, 2015).

PREMISE 4: the assignments' development is guided by the voluntary extension of the team, in the exchange and knowledge sharing and community participation, represented by the local leaderships, from the apprehension of the demands to the final propositions, understanding the territory as a subject and not as a object of study.

PREMISE 5: real local actions of various natures are carried out by the academic team starting from the microscale, such as collaborative and voluntary work, resulting in the formation of academic networks, and in the participation in local forums, alongside legal instances, and in the conduction of scientific initiation research guidelines (Luz and Silva, 2018), such as even the collaborative construction of a thermal liner in a shed of a certain municipal school (Fabiano Jr. and Luz, 2017).

3 The discourse on the method that pretends to become act

The systems that constitute the territory's investigation and analysis and the gradual construction of a understanding of the territory as a whole are aimed to produce diagnoses and prognoses, which deal with:

+ geomorphology - topography and hydrography; vegetation;

+ transport systems – roadway, railway, subway, waterway, airway, bike path, light transport alternatives, pedestrians, bus transportation, road infrastructure, individual mobility;

+ infrastructure - energy, water, sanitation, solid waste, drainage, communications, gas;

+ urban fabric and urban voids - morphological, social and environmental characteristics;

+ real land use and occupation - housing, commerce, industry, service;

+ public and private facilities - for education, health, sports, culture, leisure, systems of free public spaces and urban furniture;

+ history; regional and local contextualization;

+ population - socioeconomic characteristics, origins, customs, community organization, leaderships, ties of autonomy and belonging, index of social vulnerability, issues of land regularization, tenure, ownership and exclusion;

history; regional and local contextualization;

+ urban landmarks - by scale, use, cultural appropriation and

+ law – at urban level: Municipal Director Plan, Land Use and Occupancy Law, Environmental Laws at the federal, state and municipal levels

The discussion of the systematic aspects and of the complexity of the territory generates the understanding of potentialities and fragilities, which lead to metropolitan, regional and local guidelines that reverberate in the different scales of comprehensiveness and that are materialized in an Urban Project. From this project the hypothesis about the areas of exemplarity arises, one of which that has between 10 to 20 hectares is considered representative, and it is detailed in the Urban Design, allowing the necessary approaching in a closer scale. Initially, for the Urban Design of this parcel, its fundamental that the fundamental conditioners are investigated, its perimeter of intervention and area of direct influence are delimited so that this urban cut will never have an abstract geometric form superimposed on the place. The design decisions in this urban detachment are continually marked by the pressure of the regional issues and the decisions of the Urban Project already constituted as well as their internal specificities and of the shading areas of the immediate environment, in sense of a direct and indirect influences.

Architecture Projects under the individual responsibility of the students are developed in a common workshop, where the constant exchange of ideas covers aspects related to the intervention locus; general investigations; thematic, programmatic and morphological determinations; questions about scale and implementation; the common interfaces between design and material, structural and technical aspects and the power to constitute references of spatial quality, of use, of local autonomy and of community appropriation. The Architectural Projects are thus compromised and inevitably conditioned to the Urban Project's decisions and its configuration. It is understood, therefore, that architecture is constitutive of the city and subordinated to it with reciprocal coherences.

The Architectural Projects will be not necessarily in the area of the Urban Design or in the Urban Project region and may even be in a broad territory; depending on its rationale or scope, it is considered that the city can and should have long distance links capable of reverberation and mutual contribution. The Architecture Projects begin with the choice of a broad theme and its implementation place can gradually be configured with a defined or an open program, as well as spaces without a program, left to be appropriated by the community. The scale of these architectures can vary from the micro-intervention and the choice if the morphology, the techniques and materials is aligned with local demands and potentialities, acting like solidarity actions of community strengthening, belonging, collaboration, training, the generation of culture or income, from solidarity economy strategies.

The choice of urban fronts contiguous to regions with rural activities or potentialities and environmental protection areas inevitably poses the question of the city that is not reached, due to the conditions of socio-spatial fragility, the environmental degradation, or the lack of infrastructure, mobility, equipment and public spaces of quality. Most of the time, urgency alternatives arise, and the uncomfortable question of why this planetary condition exists, in which we all find ourselves, since there is no city in the world that has achieved full sustainability, social justice and environmental equilibrium, considering that our Brazilian cities have reached astonishing levels of inequality (Georges and Maia, 2017).

In the middle phase of designing the Architectural Projects, an architect who has consolidated experience is invited to carry out a workshop during a one-day class period, where the results of the Urban Project and the Architectural Projects under development are discussed with the guest, who submits them to criticism, essays and suggestions.

The constitution of a participative method has matured for the necessary realization of real actions, in varied scales, involving the guiding teachers and the students, and as voluntary extra academic responsibility, with the leaderships, representatives and local community groups, from their demands and desires. After the end of the academic work, the bond of cooperation and mutual responsibility is maintained with the teachers and sometimes the students, in a constant relationship, realizable collaboration in the here-and-now or in the coming-to-be, intended to strengthen citizenship, identity, rights and qualification of the public space.

4 Results: what do we have here and now?

In the course of the years, the improvement and consolidation of the methodology have been established in the involvement with the various territories of socio-spatial fragility, lack of basic infrastructure, mobility, public equipment and services, with land regularization problems. They are always extreme urban fringes, contiguous to areas with environmental and rural potential in the municipality of São Paulo, with the presence of metropolitan infrastructure such as:

+ The extreme north region, near the northern section of the Metropolitan Rodoanel and the Serra da Cantareira' fronds;

+ Two sectors of Marsilac district, at the south end, cut by a railroad branch of the old Sorocabana that joins Mairinque to Santos, with characteristics of sparse denseness, in the limits of the Serra do Mar mountain range, with rural activities and Tupi-Guarani's indigenous villages;

+ The district of Perus, near the Anhanguera and Bandeirantes highways and the Metropolitan Rodoanel's articulation of the western and northern sections, with the presence of the old Santos-Jundiaí railway, the immense Bandeirantes sanitary landfill (recently disabled) and at the fronds of the Cantareira mountain range, whose nearby cliffs are subject to granite extraction and also have a Tupi-Guarani settlement on the slopes of the Jaraguá Peak;

+ Two sectors of Fundão do Jardim Ingela, totally immersed in the southern springs protection area, a contributor to the Guarapiranga Dam, cut by the M'Boi-Mirim road, with relative proximity to the West and South stretches of the Rodoanel and containing part of the same extension of the old Sorocabana railroad.

Work is currently underway in the Vila Bela district, in the extreme east of São Paulo, near the Carmo Park, Jacu-Pêssego Avenue, the eastern section of the Metropolitan Rodoanel, cut by tributaries of the Aricanduva River, that is tributary of the Tietê river and contiguous to rural belt's remnants. All places are characterized by a strong presence of community organization and leaders with political lucidity about their rights and responsibilities. The Figure 1 shows these territories, as below:

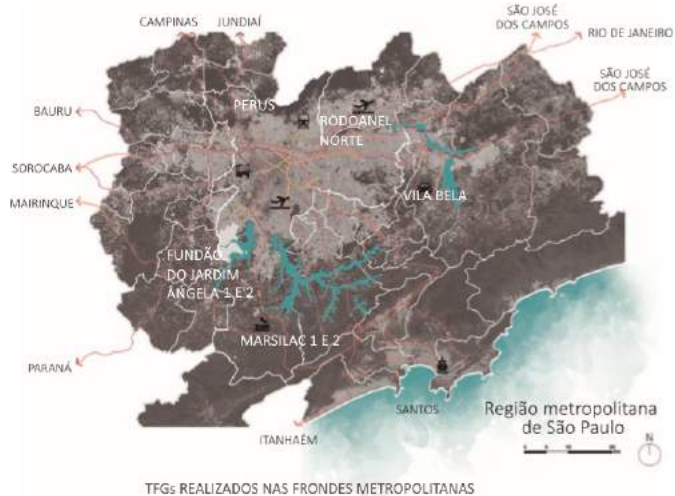


Fig. 1: The territories where TFGs were performed. Source: Geosampa (PMSP) worked by the authors. Source: Work team's collective collection, 2017.

The illustrations of the assignments are considered of collective authorship and they are also a collective collection available to all the teams that are members of the publication and publications. As an example, we will present the works carried out during the year of 2017, at Fundão do Jardim ngela, Vera Cruz neighborhood, which borders the west bank of the Guarapiranga Dam, whose location is shown in Figure 2. The survey processes, the diagnostics, prognoses and guidelines led to an understanding of the territory and constituted a fundamental framework for project decisions. Some of these products are illustrated in Figures 3 to 6, below.

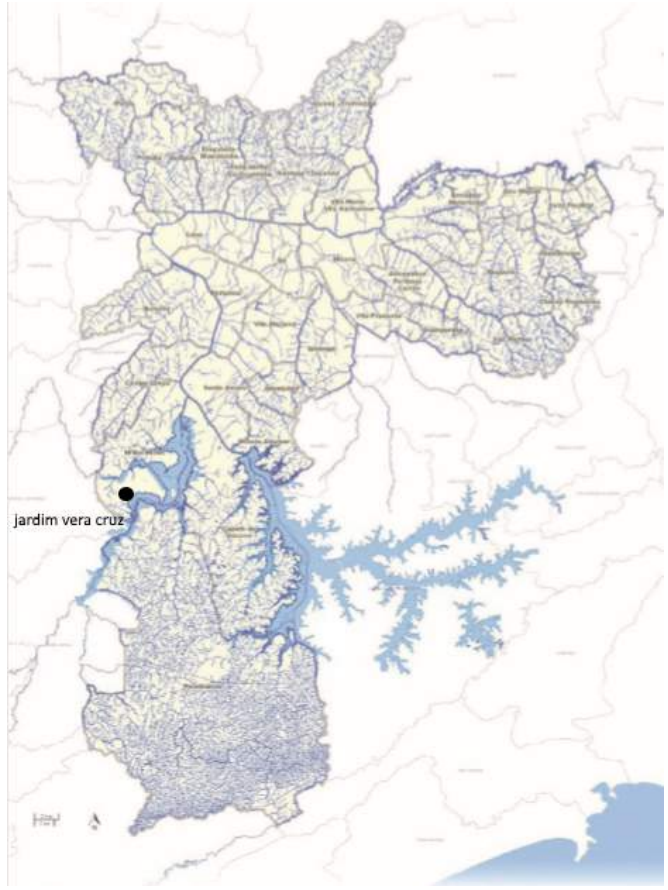


Fig. 2: São Paulo water system and Jardim Vera Cruz's location, Fundão do Jardim ngela. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.



Fig. 3: Jardim Vera Cruz and the ETA Alto da Boa Vista's and the ETE Barueri's locations. Bus routes and time spent to regional equipments. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

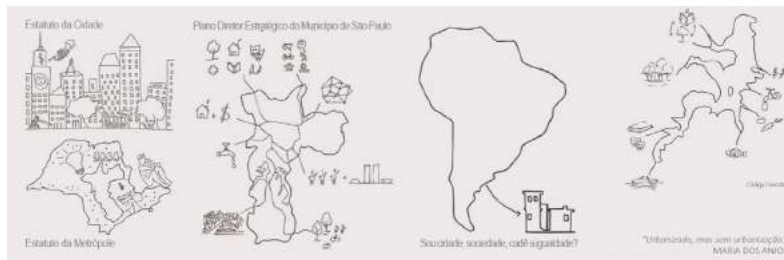


Fig. 4: Schemes of the law interpretation. Source: collective authorship. Work team's collective collection, 2017.



Fig. 5: Urban reference frames. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

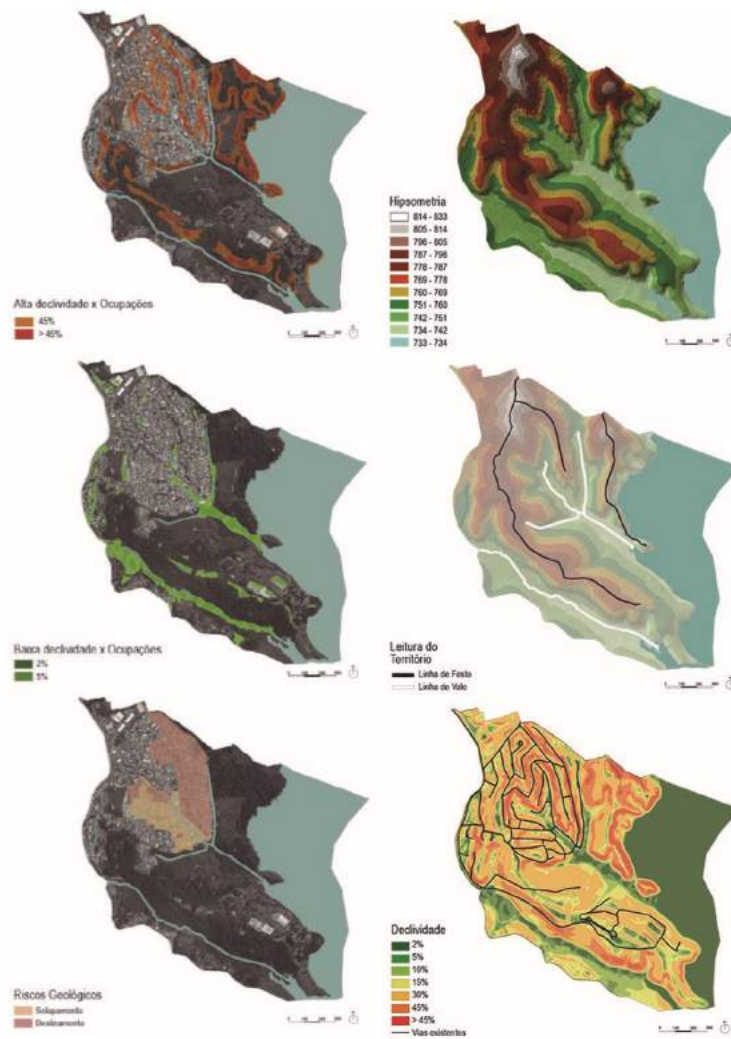


Fig. 6: Occupation and declivity relationship. Hypsometry. Ridge and valley lines. Geological risk places. Iso-declivities.
Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

Taken into account the conflicting relationship of a double urgency detected in the region - the urgency for housing and the urgency of preserving the area of springs -, the recognition of a "pressure line" between the urbanized fabric and the dam's edges was ruled as an environmental guideline, where a restricted preservation band was maintained and specific "guardians" placed in strategic places, made up of equipment with suitable uses. Between the urban fabric and this protected border, Atlantic Forest's vegetation restoration areas, organic agriculture or agroforestry would be allowed to exist without property rights, in very low density, and occupations whose urban spot was considered to be in areas of risk or environmental damage could occur would be relocated, as shown in Figure 7.

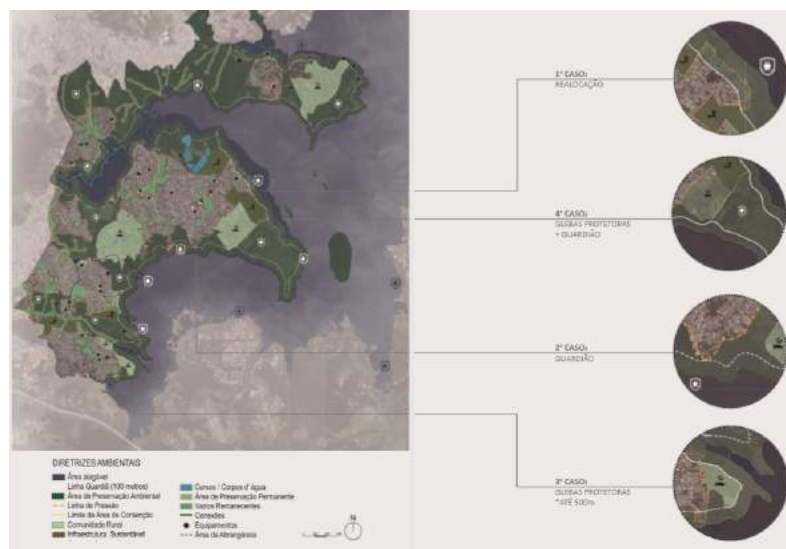


Fig. 7: Environmental Guidelines. Source: Geosampa (PMSP) worked by the team. Work team's collective collection, 2017.

Due to the precarious condition of mobility, whose only arterial road is the narrow and with few driving lanes M'Boi Mirim road, it was recommended the structuring of regional and local modalities. This road started to share the central bed system of Light Rail Vehicle - VLT -, suspended or at ground level, according to the characteristics of each section. The stations would "ask leave" to frontier lots in a compensatory use and occupation agreement, sharing public stairs and elevators that would also provide passageway. Extension possibilities and metropolitan connections of metro, road and rail modalities were established for freight and passengers, whose articulation took place through the implantation of a metropolitan railroad, bordering to the external road of the sections of the Rodoanel west, south and east. Also adopted was the adoption of the Fluvial Metropolis system, an important reference study coordinated by arch. Alexandre Delijaicov (Grupo, 2011), for which alternative routes and ports of different scales in the Guarapiranga dam were proposed. Local pockets for bus routes and a plurality of light systems were recommended, aiming at the liberation of the narrow streets, characteristics of the neighborhood, for priority of permanence and use of pedestrians. The transport and mobility guidelines are summarized in Figures 8 to 11 below:



Fig. 8: Multimodal regional mobility system. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

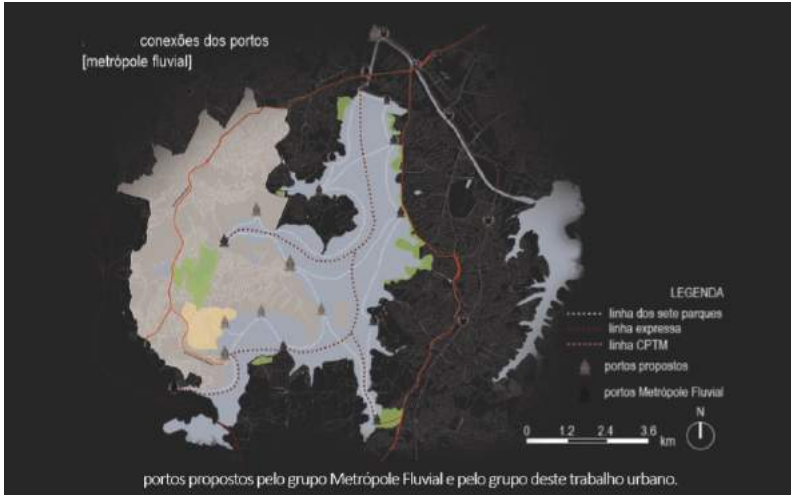


Fig. 9: Waterway transport system at Guarapiranga Reservoir. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

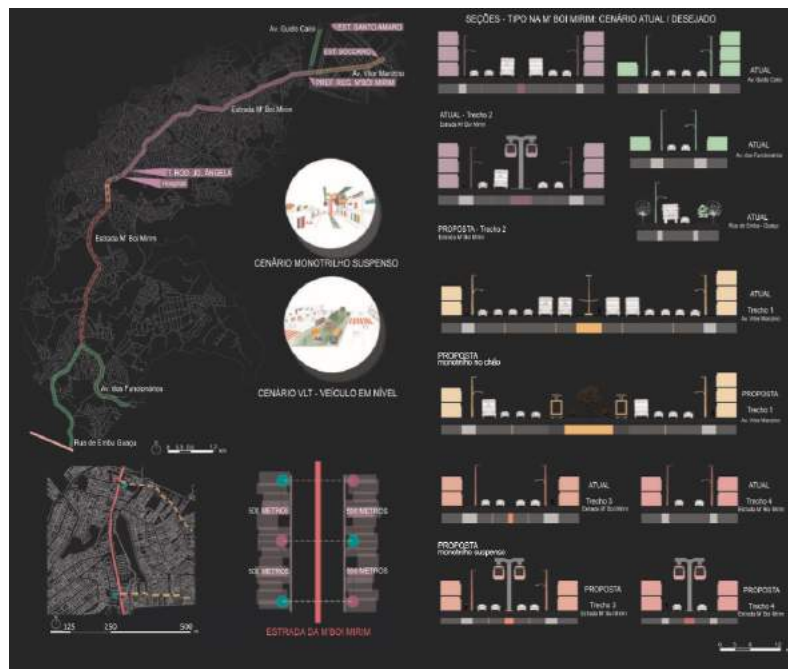


Fig. 10: Structural LRV. Source: Geosampa (PMSP) worked by the authors. Work team’s collective collection, 2017.

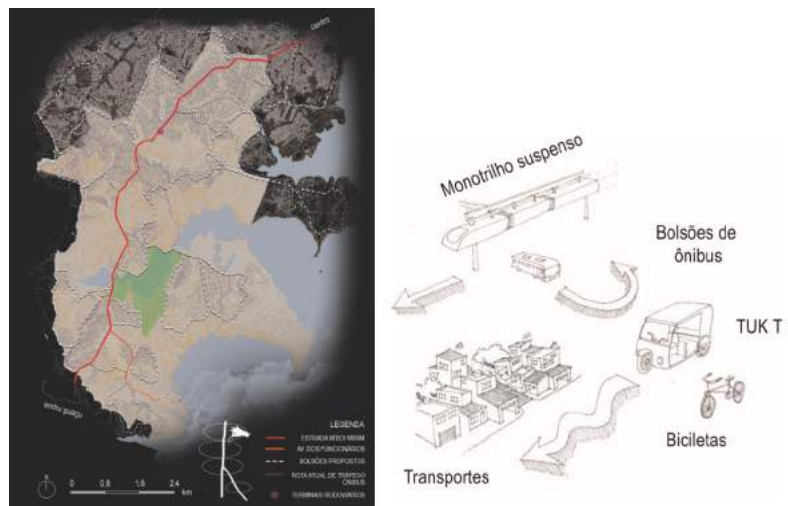


Fig. 11: Circular bus routes. Set of transport alternatives. Source: Geosampa (PMSP) worked by the authors. Work team’s collective collection, 2017.

Taking into account the scarcity of public facilities, a network of them was proposed through the systematization of needs and its coverage areas (Figure 12).

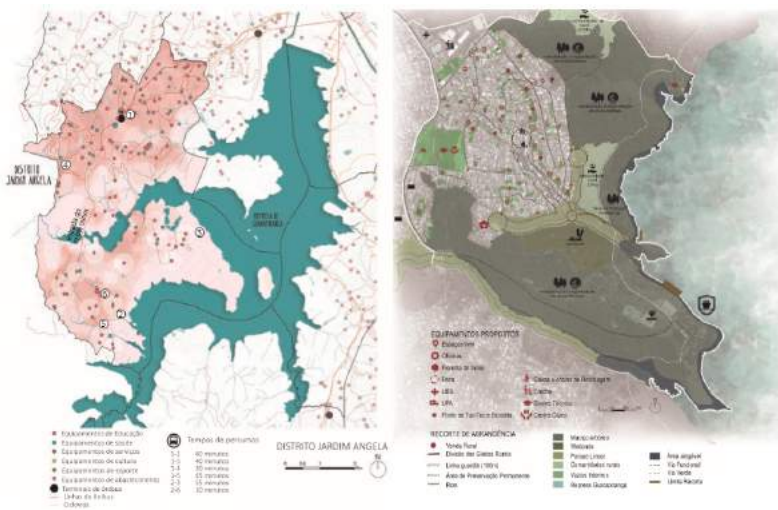


Fig. 12: Existing and proposed public facilities. Source: Geosampa (PMSP) worked by the authors. Work team’s collective collection, 2017.

Given the structure of mobility, the reading of the urban fabric led to the understanding that the habitability pact in the area of springs should be guided by zero densification, with all remaining voids remaining for renaturalization and drainage through Pocket Forests™ (Cardim, 2016), urban interstitial agriculture and free spaces or low occupation rate, for community use. Native species of high and medium size were cataloged, orienting the renaturation, observing the colors of the flowering and the protection of the fauna, whose studies are visualized in Figures 13 to 15, below.

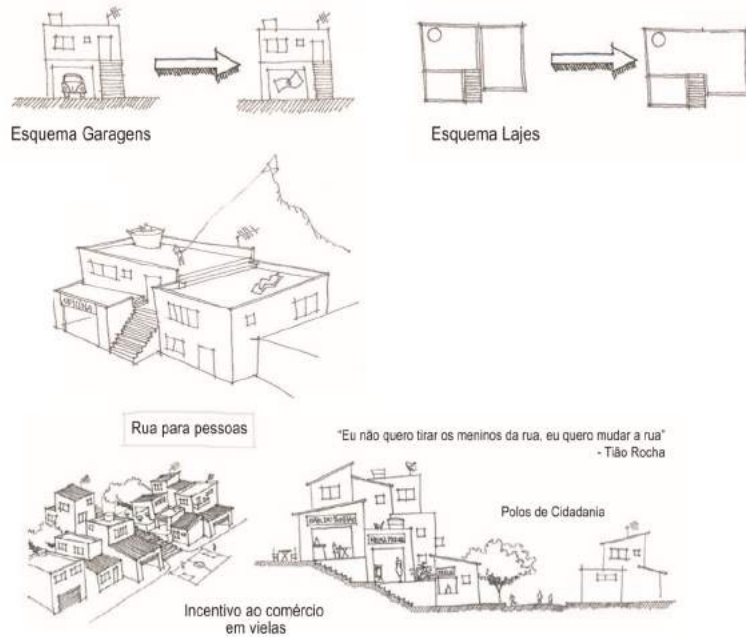


Fig. 13: Quality public spaces. Source: Collective authorship. Work team's collective collection, 2017.

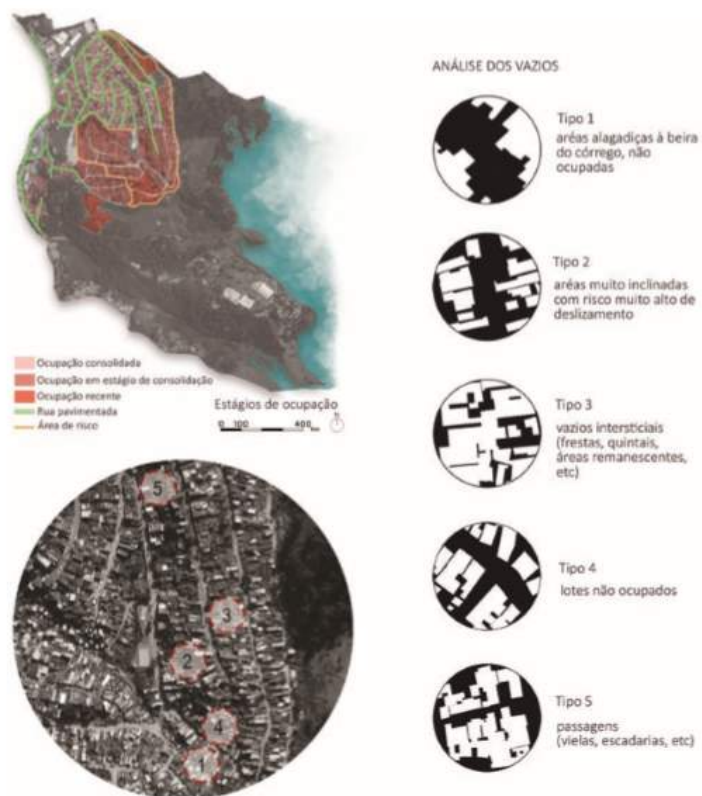


Fig. 14: Urban voids and quality public spaces. Source: Geosampa (PMSP) worked by the authors. Work team's collective collection, 2017.

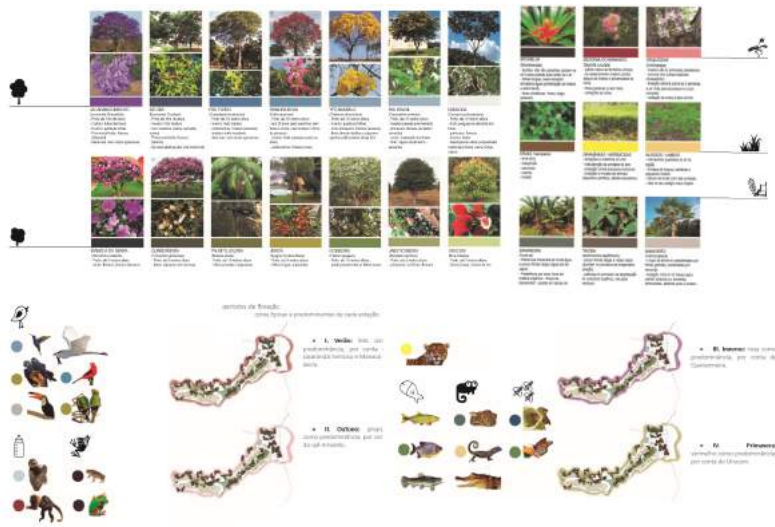


Fig. 15: Native flora species. Source: Collective authorship. Work team's collective collection, 2017.

Following these guidelines and based on the prevalent informal occupation matrix and the high levels of social vulnerability, collective ownership was considered a legal precept, considering that everything that touches the air is public, namely facades, slabs and even obsolete garages, for community use and training activities, generating income through solidarity economy systems.

The Urban Design of the detailed cut deepened the guidelines through a house-to-house survey (according to Figures 16 and 17) and design essays, aiming, according to the potentialities found, to constitute an exemplarity of possible habitation in protected areas, with low-impact infrastructure and scale, supply of equipment and qualification of the public space and landscape as an instrument of citizenship, strengthening of belonging and community ties.

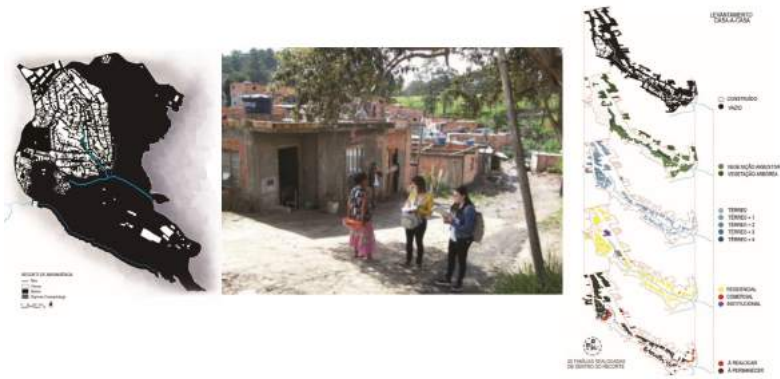


Fig. 16: Neighborhood. House-to-house survey. Source: Collective authorship. Work team's collective collection, 2017.



Fig. 17: Urban Design Portion. Source: Collective authorship. Work team's collective collection, 2017.

Characteristic traits have been defined, which are known as the "playing city" - central sector near the children's school -, "territory of the letter" - as support for cultural activities - and "space of regeneration" - in a situation of extreme precariousness, where bioremediation sanitation infrastructure systems, recyclable waste reuse systems and community uses of customarily private emergency activities such as toilets, showers, community laundries were proposed. Figure 18 shows illustrations of the intended landscape. Figures 18 to 22 present studies of landscape, infrastructure and equipment relationships.



Fig. 18: Urban Design Sectors. Source: Collective authorship. Work team's collective collection, 2017.

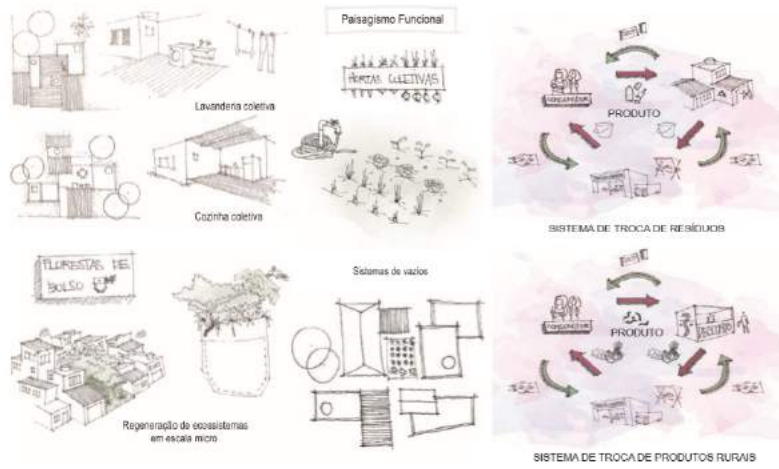


Fig. 19: Landscape and infrastructure studies: exchanges. Source: Collective authorship. Work team's collective collection, 2017.

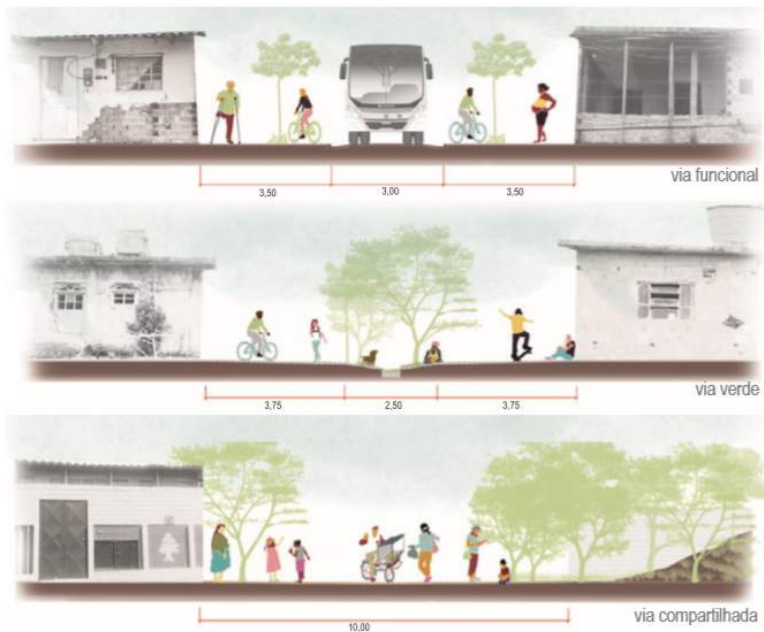


Fig. 20: Urban Design Clipping's roads. Source: Collective authorship. Work team's collective collection, 2017.

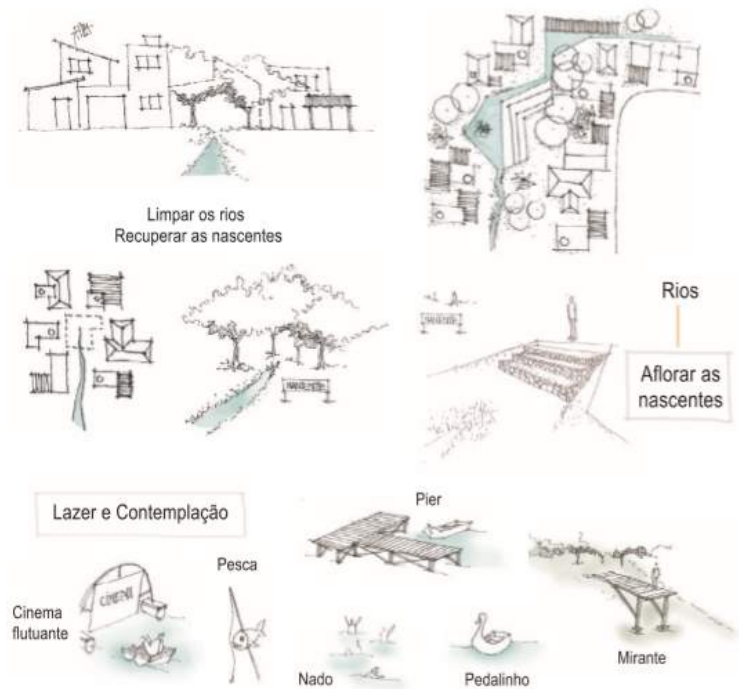


Fig. 21: Landscape and infrastructure studies: drainage. Source: Collective authorship. Work team's collective collection, 2017.

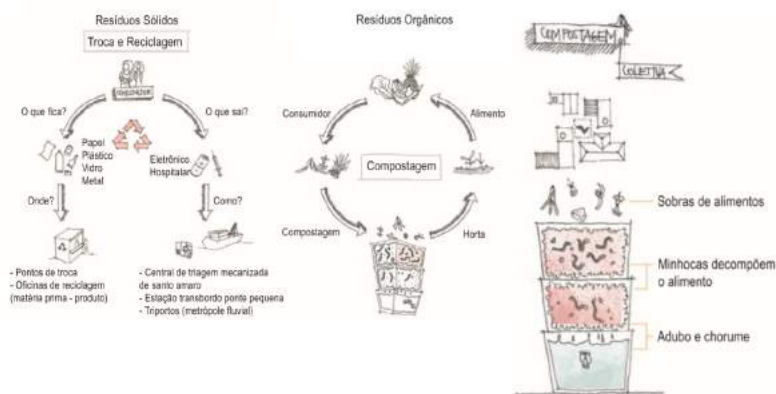


Fig. 22: Landscape and infrastructure studies: solid waste. Source: Collective authorship, work team's collective collection, 2017.

The territory configured by the Urban Project gave rise to 16 Architectural Projects, whose locations, fabric implantations, themes, scales, programs, morphologies and constructs were based on reinforcing the premises and actions already established (Figure 23).

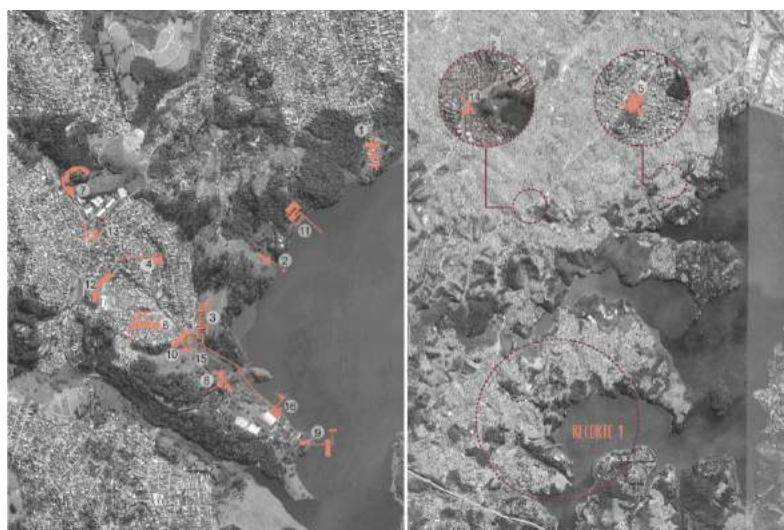


Fig. 23: Architecture Projects locations. Source: googlemaps worked by the authors. Collective authorship. Work team's collective collection, 2017. Available at: <https://bit.ly/2T5aYfI>. [Accessed 10 June 2016].

The associated development of the projects resulted in particular and common solutions and articulations, either of implementation and thematic correspondence, or of typologies constituted by techniques and details, whose most recent development is the realization of a systematization research of techniques applicable to territories of socio-spatial fragility and environmental, ongoing (Luz, 2018). All the work carried out over the several years by the teams is considered collective, as a process and as a collection, which is made available to all co-authors and especially to communities, as a collaboration and instrument of struggle for rights. To that end, we are grateful for the solidarity of the representative leaders and their communities, such as Maria Cirillo (Marsilac), Soró (Perus), Norberto Martins, Shirlei do Carmo, Maria dos Anjos, Silvia Tavares (Fundão do Jardim ngela: Vila Calu, Jardim Vera Cruz), Marli Silva, Edilene Silva (Vila Bela) and the public people who contributed to this narrowing as Helena Singer, Adriano Diogo, Juliana Cardoso and Chaia Schainer.

These Architecture Projects carried out in the territory of Fundão do Jardim ngela, Jardim Vera Cruz, encompass territorial commitments, whose authorship, as pointed out, forms an inseparable part of the collective and community work, both for the group of authors and for their availability and are guided by the the following territorial commitments established according to premises of the Urban Project: Guardians of the Forest, Guardians of the Dam, Guardians of the Line of Urban / Rural / Environmental Pressure, Qualifiers of the Public Space in the Urban Tissue, Metropolitan Qualifiers, Qualifiers and Environmental / Rural / Urban Qualifiers. The following table summarizes general data, territorial commitments and direct responsibility of authorship:

ÁREA m2	COMPROMISSO TERRITORIAL	PROJETO	ALUNOS	REFERÊNCIA NA FIGURA 31	FIGURA CORRESPONDENTE (A SEGUIR)
1600 m2	Guardião da Mata	Farmácia Viva Tipo 3	Adriana Medeiros Pereira	1	Figura 32
1600 m2	Guardião da Represa	Pólo Ambiental Educativo para Jovens	Beatriz Chiacchio Michelazzo	2	Figura 33
1850 m2	Guardião da Represa	Plataformas Beira Lago para Atividades Livres Humano-Ambientais	Paloma Rodrigues	11	
1300 m2	Guardião da Represa	Porto Multiuso na Guarnição para Navegação/ Oficina de Barcos e Memória	Maria Clara de Oliveira Celil	9	
860 m2	Guardião da Represa	Porto de Uso Múltiplo Comunitário	Vivian Helena Peronzi Prossopio	16	Figura 34
4460 m2	Guardião da Linha de Pressão Urbano/Rural/Ambiental	Monetia Rural Urbana de Interesse Social	Camila Borges de Oliveira	3	
1520 m2	Guardião da Linha de Pressão Urbano/Rural/Ambiental	Casa Atemporal	Maria Kethelje Vrolijk	10	Figura 37
1520 m2	Guardião da Linha de Pressão Urbano/Rural/Ambiental	Abrigo para idosos, Crianças sem Teto			
1880 m2	Guardião da Linha de Pressão Urbano/Rural/Ambiental	Educar entre Jardins	Keena Justo	8	
500 m2	Qualificador do Espaço Público no Tecido Urbano	Abrigo de Idéias	Danielo Pena Maia	6	Figura 35
800 m2	Qualificador do Espaço Público no Tecido Urbano	Abrigo para Comunidade LGBT	Gabriel de Souza Ramires	5	
500 m2	Qualificador do Espaço Público no Tecido Urbano	O Calor da Rua: Cidade-Escola	Helder Ferrari	4	
1260 m2	Qualificador do Espaço Público no Tecido Urbano	Centro de Reabilitação Motora Infantil	Isabella Bertoleto Cocetti	7	
400 m2	Qualificador do Espaço Público no Tecido Urbano	Centro Político	Râmelo Rodrigues Castro	12	
700 m2	Qualificador do Espaço Público no Tecido Urbano	Farol de Comunidade	Patricia Corrêa Deserti	13	
1018 m2	Qualificador Metropolitano	Estação Multimodal e Polo de Usos Comunitários	Priscilla Franco Guadagnini	14	Figura 30
8200 m2	Qualificador e Articulador Ambiental/Rural/Urbano	Passagem de Conexão entre Polos de Permanência Comunitária em Área de Proteção Ambiental	Raissa Gellere Begiato	15	Figura 38

Table 1: 16 Architecture Projects summary table with general data, territorial commitments and direct responsibility of authorship. Source: Accomplishment of the authors. Work's team collective collection, 2018.

Images of some of these Architecture Projects carried out are following bellow (Figures 24 to 30):



Fig. 24: Live Pharmacy Type 3. Source: Adriana M. Pereira. Work's team collective collection, 2017.

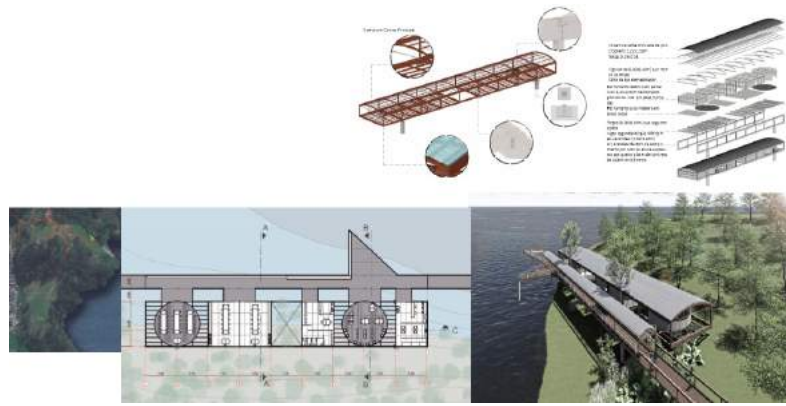


Fig. 25: Youth Environmental Educational Pole. Source: Beatriz C. Michelazzo. Work's team collective collection, 2017.



Fig. 26: Multiple Community Use Port. Source: Vivian H. P. Procópio. Work's team collective collection, 2017.



Fig. 27: Shelter of Ideas: Public space of free use. Source: Danilo P. Maia. Work's team collective collection, 2017.



Fig. 28: Multimodal Station and Community Pole. Source: Priscilla F. Guadagnini. Work's team collective collection, 2017.

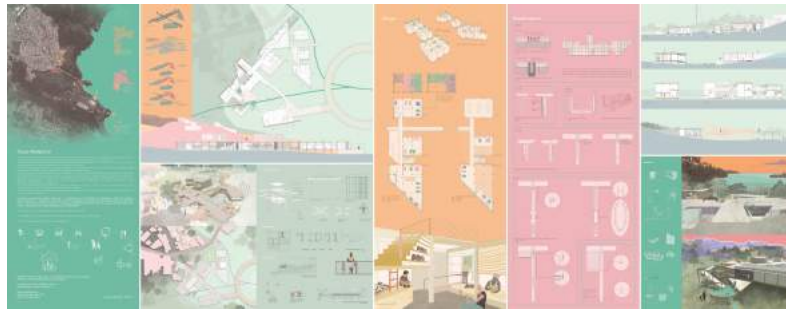


Fig. 29: Atemporal House - Shelter for the elderly and children without a roof. Source: Maria K. Vrolijk. Work's team collective collection, 2017.



Fig. 30: Connection passage between Community Poles in Environmental Protection Area. Source: Raissa G. Begiato. Work's team collective collection, 2017.

5 Project + participation: doubts and certainties on method and amplitude

Since 2012, academic and community collaborations have led to a solidity of principles, objectives and ends and a collection that begins its dissemination and continuity (Figures 31 to 35). The set of real actions in the territories points to its intensification and search for contribution, with complete effective projects realizable in collaborative publishable participations, like recently in the XI Biennial of Architecture of São Paulo (IAB / SP, 2017).

ação 01

Construção de forro acústico, em 2016, com isopor utilizado pelos alunos da faculdade para produção de maquetes



ação 02/01

Máscaras de argila feitas no primeiro dia de aula do TFG de 2016 com o rosto de todos os alunos. Máscaras pintadas na última semana de curso do ano como ação coletiva.



ação 02/02

Plantio de árvores em área pública, em Novembro de 2017, para criar espaço de convívio e sombreamento para o ateliê de artes da escola. As máscaras voltaram para a terra, sendo base para a plantação das mudas.



Fig. 31: Construction of an acoustic lining to the EMEI Chácara Sonho Azul's shed, with mock-ups styrofoam's leftovers collected at the Faculty. Performing facial clay masks and their painting. Planting of trees on public land conquered to expand the EMEI's environmental studies area, at the XI Biennial of Architecture, event Revitavilla II, whose masks served as symbolic support 'burying our faces on the local floor'. Source: Collective authorship. Work's team collective collection, 2017.

Crowdfunding internacional em 2016 para arrecadar dinheiro para criação de ateliê de arte para a comunidade.
 Realizado pelas alunas: Laura Zura-Puntaroni e Matilde Valagussa em regime de co-orientação da profa. Vera Luz de seu TFG da Politécnica de Milão com bolsa de estudos internacional. Trabalho em elaboração para publicação.



Representação à Promotoria de Direitos Humanos e Habitação para preservação da área verde envoltória do território da Escola, área pública que hoje sofre processo de invasão permanente.



Fig. 32: Crowdfunding realized in collaboration with students exchanges of the Polytechnic of Milan in co-tutoring by one of the advisors, for improvement of the EMEI Chácara Sonho Azul's art-education studio. Representation to the Public Ministry against public area adjacent to EMEI clandestine invasion. Source: Collective authorship. Work's team collective collection, 2017.



Fig. 33: Visit to the territory and Poster's Contest to the Friends of the Fundão Forum: "Water and the Community: What to Do?". Source: Collective authorship. Work's team collective collection, 2017.



Fig. 34: Project workshop with architect Marcos Acayaba with the work team. Source: Collective authorship. Work's team collective collection, 2017.



Fig. 35: Community leaders Shirlei do Carmo and Norberto Martins in academic works presentation. Source: Collective authorship. Work's team collective collection, 2017.

6 Continuities: end points, exclamation point, question mark, ellipsis

We are currently seeking to generate approximations and exchanges with corresponding experiences, according to the results obtained in the various editions of the work over the years, which is why we have made their constant publication.

As an organic development, two projects are being carried out. The first is a Postgraduate Research Project in Architecture and Urbanism for the constitution of a Construction Systems Primer for buildings and infrastructures of low environmental impact, of small and medium scale, such as autonomous and passive supply of energy, sewage bioremediation, waste processing, water supply and reuse, drainage systems (Luz, 2018). The second is a scientific initiation research on effluent treatment by bioremediation, applicable to EMEI Chácara Sonho Azul, at Fundão do Jardim ngela, an important national and international reference of art-education activities, according to precepts of school-community and educating city (Luz and Silva, 2018) . It intends to advance in the monitoring and orientation of researches and articulated proposals of masters, professional master's and doctorate, whose first embryo seems to emerge in master's degree under the guidance of one of the authors, at the opposite extreme of Brazil - proposal of architectural intervention in the National Park of Serra do Divisor, Acre -, whose diverse situation will lead to already evident approaches as method and results (Esteves, 2018).

7 Conclusions

We intended to demonstrate how it has been possible to construct a theoretical framework and effective actions of community participation and collaboration in our academic experience in the scope of Final Graduation Work, whose commitment constitutes the last stage of formation and important seal in the conduction of the competences of the future professional of architecture and urbanism.

It is a teaching discipline, whose hypothesis of participation is voluntary and therefore limited, with one of the fundamental premises being to look at extreme metropolitan peripheral regions contiguous to rural and environmental fronds - historically and historically conditioned. at the present time to the situation of endemic lack and urgency. That is, of what is non-city, not citizenship; "out of place ideas" and "place out of ideas" (Arantes, Maricato and Vainer, 2000). In this context, it has been possible to establish participatory and collaborative methods based on solidarity pacts with local leaders, which introduce students and teachers to the reading of the territory, collaborating with their experience and demands - which are evidently many - expressed as a representation of the community at large.

The approach to the territory is made through recurrent visits. The design phases, both urban and architectural design, rely on the presence of these leaders invited to the presentations at the Faculty, with voice. Local forums are also an opportunity for presentation and an expanded discussion of the work. At the end of each cycle, these are offered as knowledge to the leaderships for their collection and auxiliary instruments of claims. Extensions for presentations at Congresses and publications have made it possible to expand activities in international academic links (especially on two occasions, with students from the Polytechnic of Milan) and nationals with extra-academic links (such as with the Vanzolini Foundation, through technical collaboration in studies of environmental quality of existing equipment - the Clube Náutico Guarapiranga, currently under construction). The extracurricular actions presented above (Figures 32 to 36), also voluntary, are constitutive of the method, so that there is a commitment of effective exchange of knowledge and concrete actions.

The future possibility of comparison and exchange with other similar Brazilian and Latin American experiences, institutionally established or carried out by community strength and resistance, is unfolded.

There remains to be clarified some light on the direction of these efforts and their possible future, since they ask the questions in these new beginnings:

It is possible, in the field of architecture and urbanism, to implement actions guided by a concrete and concrete humanism, where actions from the bottom up or, even better, side-by-side actions can articulate erudite and popular knowledge to the demands and programs of the real actors with which they are intended to participate in effective decision-making?

Can the rupture of the surplus value and alienation of labor implicit in the industrial mode of production form situations of autonomy? If the technical backwardness in the construction industry in Brazil is evident in relation to labor, with a surplus of supply at minimum costs and a perverse working relation, it is possible to constitute a small and medium scale reformulation of the reverse, as an alternative to large industrial systems, regardless of concentrated investments, in autonomous community manufactures? (Luz, 2018).

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