

Pontoverde Project: Green Urban Intervention in a Third World Country

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Abstract:-- The article presents data and tests that were made in the academics and associates with the practice of a urban intervention in a 3rd world country. For us to present this project, we had to go deep into the data analysis for one reason: we had to prove and show that "going green" is also "making money". The unique characteristics of a urban intervention in a 3rd world country begins here. These countries live in a reality that all the municipality money if really restricted, so it has to go to all the basics needs. So for a urbanist that pretend to make something really happen in the urban development, it has to be proven that making those investments the municipality will save some bigger money later. In association , the projects also have to be in agreement with the public regulations. That being, making the urban intervention really happen in these kind of reality, the urbanist has to be a really articulate manager.

Keywords: Green intervention, third world country, urbanism, sustainable cities, public private partnership , project management.

I. INTRODUCTION

have a really rough urban space. Most of the time there is no places to seat or a shadow to stop by. As a pedestrian, you fell walking in a dry and noisy desert.



Figure 1: Pedestrian in São Paulo with no place to wait or cross safety

That being, walking through concrete streets with no safe space could turn into a really nightmare. That fear is what makes cities so dangerous, because them they become nobody's place of attachment. The idea of a green intervention is to make cities more comfortable, dealing better with heat, water drainage and urban species.

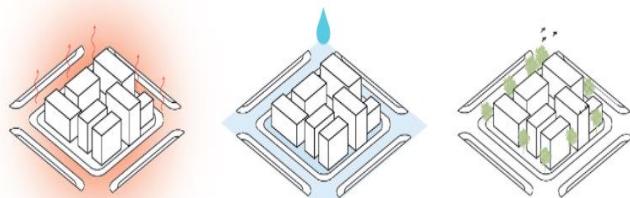
II. CURRENT SCENARIO IN SÃO PAULO

In São Paulo, the main legislation- published in 2014 - detected 3 main environmental problems in the urban area; heat islands, impermeable soil and lack of green. Heat islands

are diagnosed in center parts of the city where high buildings prevent the sun to invade the space, as well it

capsule the heat where it touches it.

This issue is very close to the lack of green surfaces, in which provides more concrete surfaces that absorbs the heat and also it doesn't refresh the Oxygen as supposed. Dealing with concrete in the absurd way it has been played, also avoids water to enter its natural way: the soil. That been, the water runs on the concrete surface getting more speed and accumulating in the deepest point, causing water rushes and flooding.



Melhoria do microclima

Melhoria da drenagem

Atenção a biodiversidade

Figure 2: Microclimate demands

In addition, the current financial scenario is a challenge as well. Municipalities trying to deal with the money they have to deal with the basic needs emergency. For that issue, saving resources and money are mandatory in any public project. Exploring that demand, green urban intervention are the key for the start of urban development once they reuse natural resources, prevent and less the consequences avoiding also cost with reparations and stimulates local conservation.

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III. CONCEPT AND TESTED DATA ANALYSIS

Working with scientific testing and producing very accurate data, we could detect that creating green surfaces could produce many benefits in a few different parameters.

The architect solutions that could avoid heating, produces local flora and also deal with water drainage are green roof and walls combined with natural ventilation and insolation.

Dealing with the components of a green roof, you need to make a waterproof membrane followed by mechanical protection, soil drainage being filled with substrate and the appropriate species.

Componentes do telhado verde

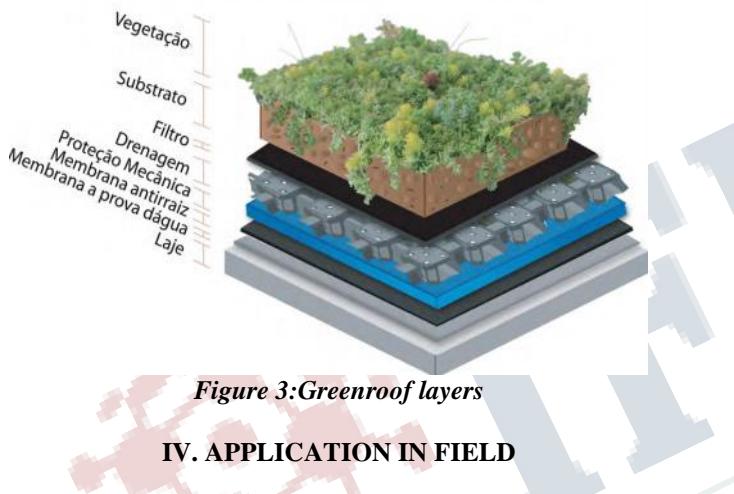


Figure 3:Greenroof layers

IV. APPLICATION IN FIELD



Figure 4: Green intervention using known techniques

Having in consideration the financial and political crises that are held by third world countries in most of them, the ideal way of working with urban intervention is to propose small and collaborative ones. In a way to avoid huge cost to the municipality, the propose is to use materials and practices they are already used to.

As well as the tools and techniques used, it's important to consider the appropriate scale of the project. The most

common scale to be held by a local community and can also make a environmental impact it's between a couple of lots, including the sidewalk.In that way, you can involve people to work on your own lot, each one of the and have a common intervention that brings closeness to the neighborhood.



Figure 5: Suggested scale project

V. UNIQUENESS BEHIND PONTOVERDE PROJECT

As an urbanist that detects places that needs technical intervention, the most important part of th job was actually to the local demands even when it went opposite side of the technical diagnosis.

The uniqueness key behind the Pontoverde Project is to really integrate community demands, technical solutions and public legislation.

For the last matter, in a third world country you have to deal with a lot of bureaucracy but also with a few overlapping legislations. That why the most effective performance is to attend public project calls that include environmental compensation.

Using public guidelines associated with the private investments, we have been able to manage few great green intervention in São Paulo.

With knowledge and expertise in dealing with public organs logistics, we could be able to investigate all the legislation and detect what is the best way to develop and approve the

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project.

In order to attend those public incentives, our projects are developed following the public standards and laws. Respecting this matter we are able to work in a permanent and concrete intervention, ensuring the community that was involved in the process will manage to have a project that really meets theirs demands but also that stays there for the longest time possible, once accomplishing this kind of realisation is a real hard work deal.



Figure 6: Appropriation of space is the guideline for manutence

VI. ARTICULATION BETWEEN INTEREST

As a third world country city as Sao Paulo in a huge financial and politics crises both public and private sector are developing ways to do more with less. Considering that, owners of bigger houses located in a valuable region of the cities are looking for ways to low the public fee costs. Having a high price in taxes some owners are not able to manage the house manutence therefore its creating a scenario with lots of empty houses in the cities, not fulfilling their social responsibilities. In the other side, medium-large sized companies are looking for projects that involves environmental responsibility as a way to also low the taxes and make their business alive.

As third part of the sim, the public organs deal with protocols. Thats why applying for a green intervention it's necessary that you develop theory and prototype so it can be proven as functional and effective.

Making a prototype autonomously to provide example so they can put out in the protocol. Once you get the experience and also the expertise to replicate it in different circumstances, in the whole city , worth spending the time on opening new methods. Although, the magic really happens

only if can be proven to work without public money. Partnership with private companies are needed to make it affordable and to stimulate the sustainable way of life. In the need to be coordinated by the public organs so it can guarantee the community benefit. It's a saving costs policy. So in order to be green to be cheaper, we manage to be cheaper as long as been green its possible.In that reality, its the awy we as urban architects could make city emprovement happens where it's hard even to provide basics needs as health and educatin for the hole population.

V. CONCLUSION

In conclusion, the Pontoverde Project not only integrate academics studies with researchers but also insert it in the municipality's work ground without letting the community participation out of the equation.

Therefore, the architect urbanist who wants to initiate participation in developing a 3rd world city has to be much more than the project author; it has to be a real diplomat.

BIBLIOGRAPHY

- [1] Gehl, Jan, "Cities for people," 2010
- [2] Fraker, Harrison, "The Hidden Potential of Sustainable Neighborhoods" , 2013.
- [3] Newman, Peter "Resilient Cities" Jun. 2017..
- [4] Calthorpe, Peter, "Urbanism in the Age of Climate change" , 2010