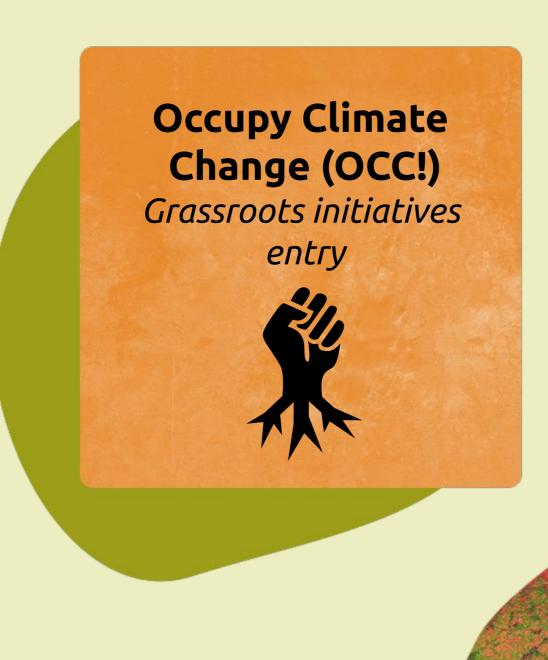
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ENVIRONMENTAL HUMANITIES LABORATORY





Recovering a natural habitat in Lima: Citizen participation in the Pantanos de Villa Wetlands

By Anna Torres Mallma

Where is this city-initiated initiative implemented? Who are the promoters? Who are the beneficiaries?

Pantanos de Villa Wetlands is located in Los Cedros de Villa neighborhood in the Chorrillos district, in Lima, Perú.

The promoting agent of this initiative is the Municipal Authority of the Pantanos de Villa -Prohvilla. It is a decentralized public office of the Metropolitan Municipality of Lima, with legal status and administrative, economic, and technical autonomy, in charge of the management and administration of the Pantanos de Villa wetlands.

The beneficiaries are the animal species (aquatic birds, reptiles, amphibians, fish, and small mammals) and aquatic plants (*totora* and *junco*) of the Pantanos de Villa. Other beneficiaries are the residential neighborhoods located closer to the wetlands.



Image 1: Panoramic view of the Pantanos de de Villa wetlands by the author

Image 2: Current extension of the Pantanos Villa wetlands by the author

How does this initiative engage with climate? Does it tackle mitigation, adaptation, both, or other dimensions of climate change?

The cleaning campaign of solid waste that takes place in the water canals that feed the lakes of the Pantanos de Villa wetlands is crucial in the adaptation of climate change. The main goal is to recollect the disposal of construction and demolition waste; and to recycle solid waste located in the borders of the canals. These walks around the canals allow Prohvilla staff and the volunteers to monitor the quantity of garbage around the wetlands, to guard water quality, and to teach good practices in the neighbors routines that benefit the preservation of the wetlands. It is a way of restoring fragile coastal ecosystems and thus maintaining the functionality of the landscape and reducing risks from the effects of climate change using community participation through practical solutions.

What are the main objectives? What are the main values?

The general objective of Prohvilla is to initiate "a knowledge, attitude, and practice (KAP) process" so that citizens, companies, and institutions complete actions in favor of the conservation and rational use of the Pantanos de Villa wetlands. For this, they focus on "executing projects and campaigns aimed at various sectors of society to increase awareness, appreciation, and understanding of the ecosystem services offered by the wetlands (CECoP: Objective 6) and promoting responsible citizen participation in the Management of Los Pantanos de Villa. (CECoP: Objective 05)". According to the annual report published in 2019 by Prohvilla, the ecosystems services identified are: "(i) Of supply or provision, are the fibers such as the *junco* and the *totora*, as well as some species that are being evaluated for their value nutritional. (ii) Regulation, there is air regulation, water regulation, bioremediation, tsunami barrier, and temperature regulation. (iii) Supportive or support, it becomes an important genetic storage center for the conservation of its biodiversity, being a habitat of 210 species of birds between migratory and resident, 47 species of flora, 13 species of fish, 08 mammals, 53 from aquatic insects and 55 from arachnid species. Finally, (iv) Of culture, which allows you to enjoy the scenic beauty, as a means of healing, a sense of identity and belonging, source of healing, education and for ecotourism".

In this sense, campaigns/projects are focused on the residents of the area. The aims are: (1) to contribute to the conservation and care of the bodies of water that feed the Pantanos de Villa wetlands (divided into four sectors: Horticultores, Ganaderos, Vista Alegre, and Villa Baja); (2) to raise awareness of social actors in the immediate environment about the care of bodies of water and support their vigilance by promoting a good environmental practices (care of canals, knowledge of biodiversity and environmental threats and regulations); (3) and reduce the negative impacts on the water bodies of the Pantanos de Villa wetlands with to strengthen its identity with the natural space such as the canals, the beach/nesting area, etc.). The call for volunteers to participate in the cleaning campaigns value the service of the participants and their collaboration with tasks of collecting and sorting waste. Finally, their participation is recognized and documented with a certificate signed from Prohvilla.

What is the timeline?

The cleaning campaigns are part of the Communication, Education, Awareness and Participation Program of the Pantanos de Villa Municipal Authority (CECoP PROHVILLA) and are valid for five years, so the proposed period is from 2020 to 2024. However, they have started since 2019, due to COVID-19. The project is executed leaving a month between calls.

Are there already visible effects?

The cleaning projects allow us to observe two sides of a coin simultaneously. A positive effect is this: thanks to the training sessions before the cleaning tasks, the volunteers become more aware of the preservation of these canals. The residents involved have deeper knowledge about what type of waste affects the canals. Another positive effect is that it fosters a sense of belonging to the place at the individual and community levels. Moreover, these activities contribute to the formation of the resident's identity. Although these areas of intervention are considered boundaries between neighborhoods, it allows volunteers to feel part of a community far beyond their district boundaries. In this direction, the cleaning tasks of these areas allow for improving the urban image and the quality of life, inviting the residents involved to create policies of care towards public spaces such as the streets or pedestrian passages that border the canals.

On the other side of the coin, we find that, by taking out the canals of waste, unscrupulous people who are not residents have more free spaces to deposit more garbage; for example, residents claim that taxi units park nearby and leave any kind of garbage. Moreover, some trucks move construction waste and find in these areas the right place to leave their "cargo" illegally. Surveillance systems must be even more rigorous to prevent this type of criminal action against environmental health.



Image 3: View of the Premio Real canal by the author

Who are the actors involved? What are their backgrounds?

The first call is for the residents who live in the Special Regulation Zone (nearby areas) that involves neighbors from the districts of Villa El Salvador, San Juan de Miraflores, Santiago de Surco, and Chorrillos. Next, educational institutions and companies which are closer to the Pantanos de Villa wetlands are also invited to participate. Other groups of participants are members of the Peruvian army and public cleaning staff from the municipalities involved. Prohvilla employees (from the director to the tour agents) participate in this campaign, showing an example of commitment to ecology and the environment. All ages are invited. Thanks to social platforms, the call is extended to any citizen who wants to collaborate with the project. There is a group on the Facebook Platform where they receive all the information to participate. The last call involved approximately two hundred sixty participants.

Which limits (institutional, physical, social, etc.) does it encounter?

Cleaning projects cannot be extended to other neighboring areas, such as those bordering the beach. For instance, every time dead birds appear on the beach adjacent to the wetlands, Prohvilla recommends avoiding this area for visitor circulation, since the cause of death of these animals is unknown. However, the responsible institution must react immediately to the removal of the birds' bodies, so residents are able to intervene in this area and clean it.

One aspect that draws attention is that, during the collection of waste from the canals in the four sectors, the volunteers have come to find scattered human remains, which causes fear among the volunteers and indicates a high level of insecurity in which they are located: residents and the Pantanos wetlands are vulnerable too. Another limitation is that these areas do not have public lighting, so it is difficult to extend the shift during the day. For this reason, the shift starts at 8 am.



Image 4: Volunteers working during their morning shifts by the author.

Are any shortcomings or critical points visible? What other problematic issues can arise from its implementation?

What is critical is the amount of waste that is removed from the intervention areas. The tonnage of waste does not disappear. In the last project completed on May 27th, 2023, 2556.51 kg were collected between general waste, non-usable waste, and wet and dry undergrowth. This scenario shows that some sectors are in a more critical situation than others, as was the case of the Ganaderos sector. If it weren't for these cleanup campaigns, these areas would be considered big dumpsters for both residents, and wetlands. In these vulnerable areas, more rigorous surveillance systems are required to penalize polluting actors on behalf of Prohvilla, with the support of neighboring companies and/or neighborhood associations. A 24-hour surveillance station with cameras will be useful, but it is understood it requires a considerable budget.

The canal area does not have an infrastructure that favors improving the state of protection and facilitating cleaning and maintenance tasks. For example, having lintels prevent flooding due to obstruction of waste or curbs to control invasive vegetation and facilitate gardening work, and low retaining walls that prevent landslides into the canals. Once again, it is understood that these interventions correspond to the implementation of public ornament projects executed by the district municipalities that do not take an initiative.

The calls for campaigns are not often because it does not attract many volunteers. Prohvilla needs more time to call for more volunteers to gather again. The last call brought together 260 volunteers to cover the four sectors. The use of machinery would be helpful for these tasks but the cost is not considered in the current budget of Prohvilla.

These routines of maintenance of the canals will recover the ecosystem services of the Pantanos de Villa and preserve the connection with the natural landscape in a chaotic urban environment.

How would it be potentially replicable in other settings?

The citizen participation through cleaning tasks can be applied in other vulnerable natural areas where the problem of contamination by waste is alarming. Despite having the streets cleaned by the municipalities, it is important to identify the most critical areas within the natural reserves (which are generally the borders/edges) and consider organizing cleaning brigades under legal and regulatory protection in their functions.

The example of the volunteers and their determination to do these tasks in the best way show that it is possible to invite citizens who care about natural areas collectively, seeking funds for the execution of future projects that complement cleanup campaigns, such as: "signposting, revegetation, monitoring and surveillance, and dissemination of awareness" proposed by Prohvilla.

Is this initiative conducive to broader changes (law, institutional arrangements, long-term sustainability or community preparedness, etc.)?

If we do not know the value of urban ecosystems for the city, we cannot demand to care for them. That is why awareness about the borders and areas adjacent to natural areas is the first step for the resident to connect with this space full of wildlife. Second, the current limitations reflect the fact that in order to succeed the municipalities involved in the project need specific regulations that can control the social dynamics on the edges of the Pantanos de Villa wetlands. Two fields in which new regulations should be implemented are the regularization of land use and the circulation of public and heavy transport. As happened in the past when the wetlands lost 80% of their surface (from 1,530 hectares to 263.7 hectares) due to "taking lightly" the impact of land uses that did not consider the life of other species in the wetlands.

By prioritizing its conservation, citizens are invited to eradicate all practices of speciesism that prevent us from respecting and valuing the lives of other species. Therefore, we must consider these other non-human lives (aquatic birds, reptiles, amphibians, fishes, small mammals, and aquatic plants) also deserve a place to live in balance with human society and that in the end, this coexistence allows the wetlands to be one more "living" example for the city. As long as this cleaning campaign continues, Prohvilla will be raising awareness and setting an example to future generations of the care and value of other lives that also matter to the planet. Thanks for teaching us how to take care of our communal home.



Image 5: Aquatic birds resting in the lake Marvilla wetlands by the author

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