



COMBATE ÀS FONTES DE
POLUIÇÃO MARINHA POR
RESÍDUOS SÓLIDOS

About this document:

This is the **Guidelines for Communication and Transformation of Behavior on Waste**, part of the project “Fighting the land-sources of marine litter pollution” being implemented by the Brazilian Association of Public Cleansing and Waste Management Companies (ABRELPE) to the Municipality of Santos, Brazil, and its Municipal Secretary of Environment (SEMAM), with funds from the Swedish Environmental Protection Agency (SEPA).

With one year period, the project gathers studies, actions and propositions that aim to identify and fight the land-sources of solid waste pollution in the estuary and beachfront of Santos. The project team and a group of experts focused on the current municipal solid waste management practices in order to identify the possible gaps that cause the littering of all kind of post-consumption materials – especially plastic items.

In this sense, this document proposes communication guidelines for implementation of the activities foreseen in the Action Plan defined by the project. The objective is to provide elements and pathways to inform and engage citizens about marine litter impacts and bring awareness that will lead to transformation on behavior related to waste.



Author: Guilherme Turri (guilherme.turri@gmail.com)
Coordination: ABRELPE (secretaria@abrelpe.org.br)
Design: Gustavo Alencar (gufelipealencar@gmail.com)

About this project:

The project developed six activities that generated the following technical reports:



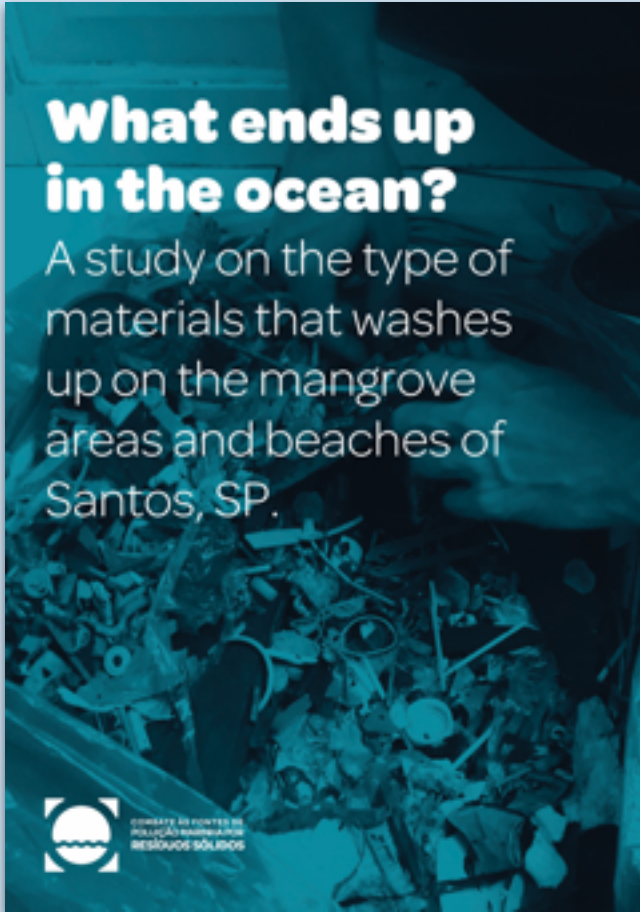
1. Brief Overview of Actions to Fight Marine Litter - Brazil and Santos (SP)
A survey on the current actions at National and Local levels



2. Santos: setting the scene of the local waste management system
Mapping of the context, actors and responsibilities in the MSW management system



3. Where does the marine litter come from?
Identification and description of the main hotspots of marine litter in Santos, Brazil



4. What ends up in the ocean?
A study on the type of materials that washes up on the mangrove areas and beaches of Santos, Brazil.



5. Action Plan
Upcoming actions in the short and long-terms

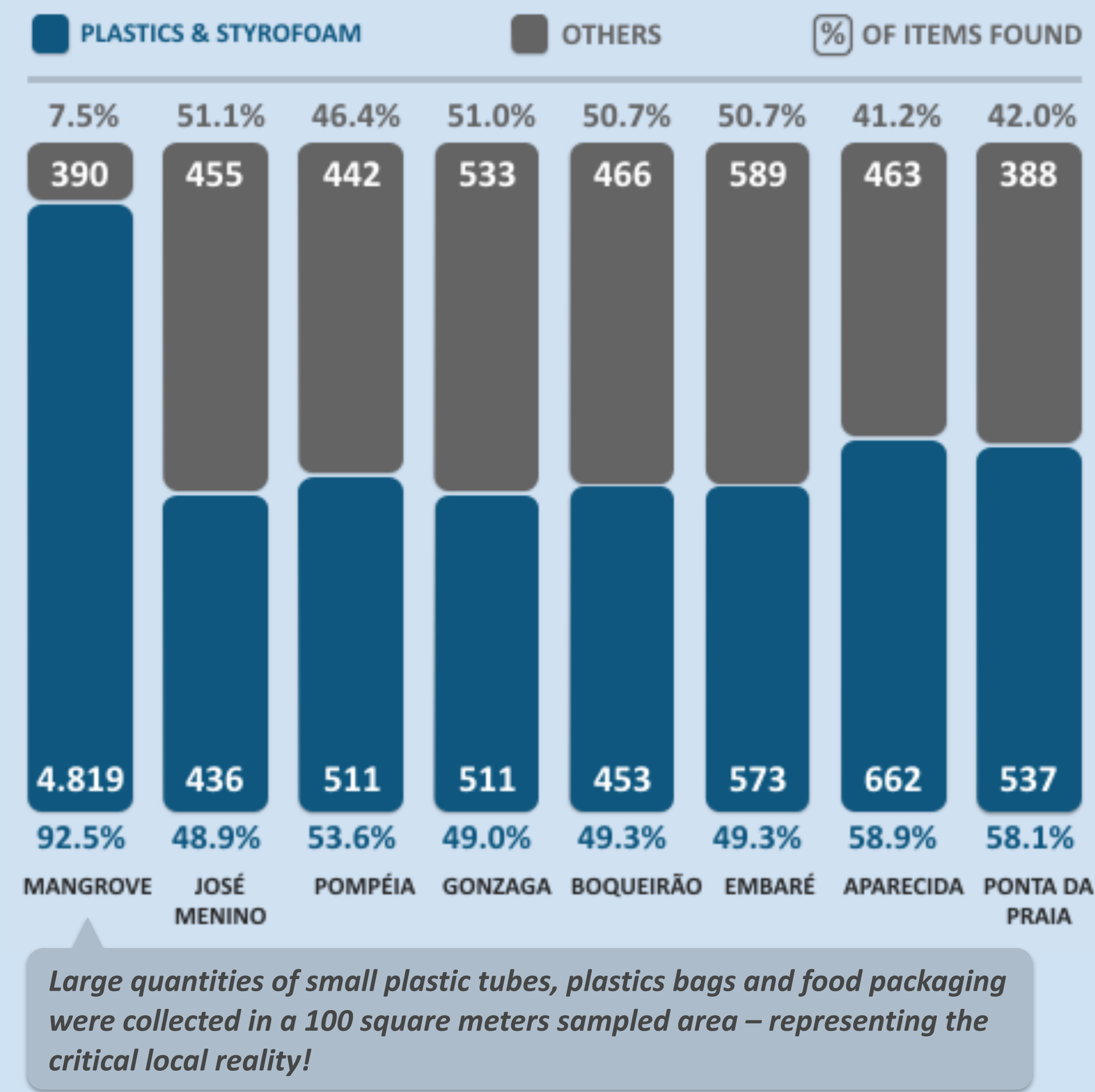


6. Guidelines for Communication and Transformation of Behavior on Waste
Propositions on how to dialogue with society

Definition of the land-sources of marine pollution

The project focused on three main hotspots of solid waste that becomes marine pollution: irregular dwellings known as **PALAFITAS COMMUNITIES** located at Santos and São Vicente estuary margins; the **DRAINAGE CANALS** that cross the most urbanized areas of the city towards the **BEACHFRONT**; besides the impacts suffered by the other two hotspots, the beach itself is one that is influenced by littering behavior from its visitants.

And to better understand **what is dumped** by these hotspots, samples were collected in the mangrove area near one of the palafitas community and in the sand strip of Santos beachfront. The results can be summarized in the graph:



In summary, these two hotspots can be classified as **moderate** to **extremely dirty**.

Definition of the land-sources of marine pollution

Mangrove waste collection



Beachfront waste collection





Guidelines & Pathways

About the proposals:

Each land-source of marine pollution (“hotspot”) presents completely different contexts: from social dynamics to the public waste management structure and even behaviors that lead to inappropriate disposal. In this way, each one requires its own efforts, although interconnected by the macro strategy of the municipality for the reduction of marine pollution.

The input to the proposition of communication actions aimed at transforming behavior also comes from three sources:

1. TECHNICAL ASSESSMENT

From the reports resulted from the technical evaluation about the hotspots.

2. TESTIMONIALS

Obtained from direct contact with local groups.

3. MULTIDISCIPLINARITY AND OTHER BACKGROUNDS

Concepts of other behavioral disciplines and experience from other projects on waste and behavior transformation.

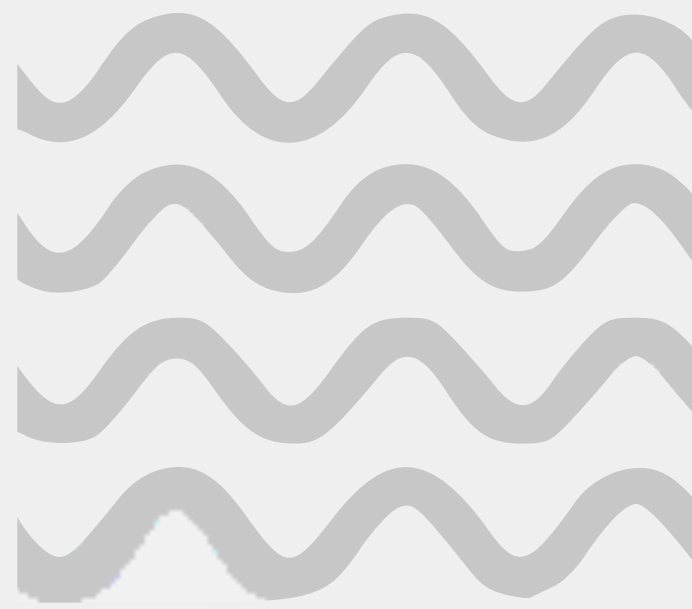
The more in-depth contextualization of the city and its waste management, each hotspot, as well as the proposed actions can be found in documents 2, 3, 4 and 5.

Picture: testimonials obtained at the beachfront



Picture: testimonials obtained at São Manoel palafitas community

Guidelines that inspire us:



Convenience prevails over Consciousness.

Information is not enough. On a daily basis, the smallest barriers can prevent us from doing what we know to be right.

Correct disposal needs to get close to something convenient, simple and automatic.

“Doing MY PART” is sacrifice. “BEING PART” is benefit.

Adopting a new individual habit is always an effort that requires determination, discipline and perseverance.

Being part of a collective change is more motivating and enduring, and brings broad and subjective benefits.

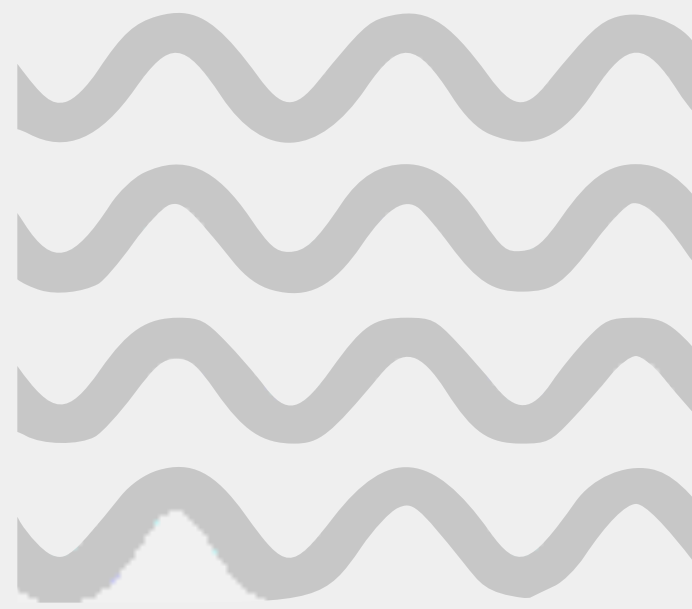
The playful can be more efficient than the punitive.

Whether in educational pedagogy or civic behavior, the punitive system requires a subject and an observer, and tends to be transgressed whenever possible.

A playful system creates positive experiences, which tend to be repeated. Playing is cooler than following rules!



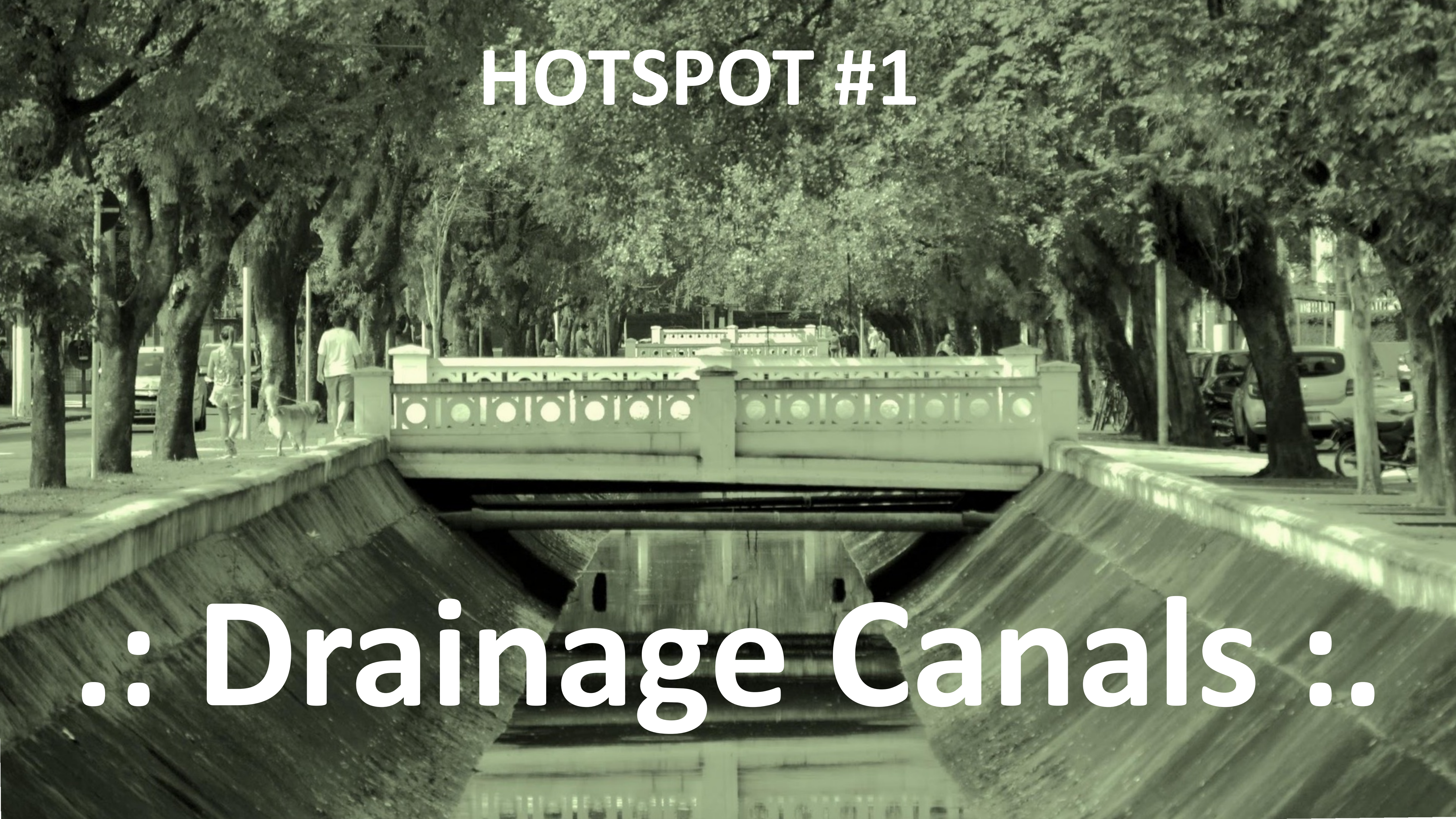
A new pathway: Lixo Fora D'Água



To understand the systemic effort to reduce marine pollution, it will be necessary to create a motto that is simpler and more direct to be communicated to the population than the current one “Fighting the land-sources of marine pollution”.

Under these premises, the logo chosen Lixo Fora D'água (Trash out of Water, in free translation) aims to: dialogue directly with the population by assuming a more popular term for waste, identified here as "trash"; the "out of water" brings the message that it is not only the oceans, but the protection of all water bodies such as rivers, lakes, etc; and the two different shades of blue that refer to the colors usually attributed to water, but which also integrate the logos of the two organizations responsible for the project, ABRELPE and SEPA.





HOTSPOT #1

:: Drainage Canals ::



DRAINAGE CANALS

The drainage canals have as their sensitive point the diverse and imprecise origin of their contamination, since they cross the city and suffer both with the direct (waste thrown in the canals) and indirect (waste from streets brought by the winds and rains) littering.

In this sense, it is fundamental that the **strategic core** of the proposal is in a **technical solution** to mitigate the impacts of pollution, supported by communication efforts that give massive visibility to the problem.

WHAT IS FORESEEN IN THE ACTION PLAN

- **Booms installation**
- **10 new floodgates installation**

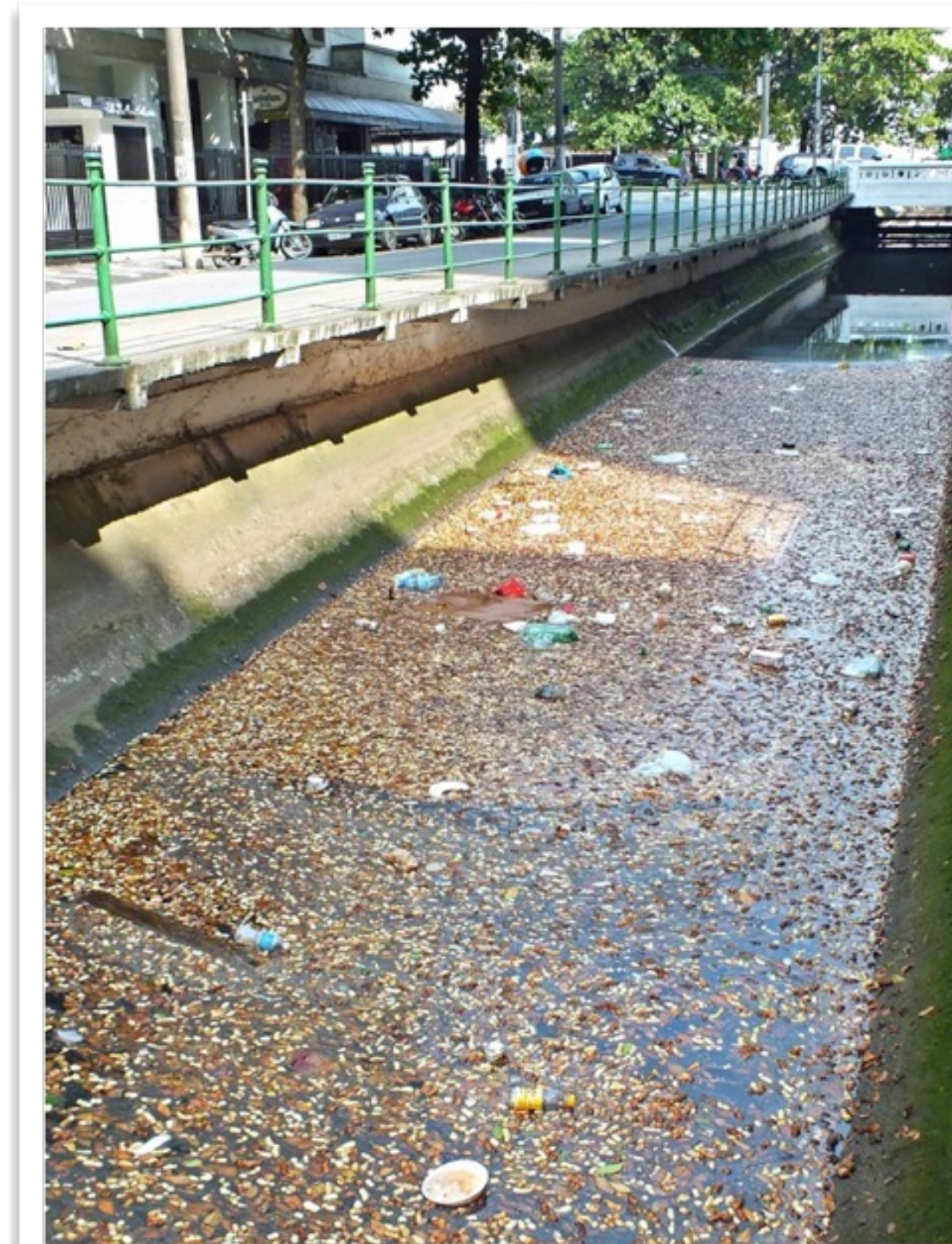


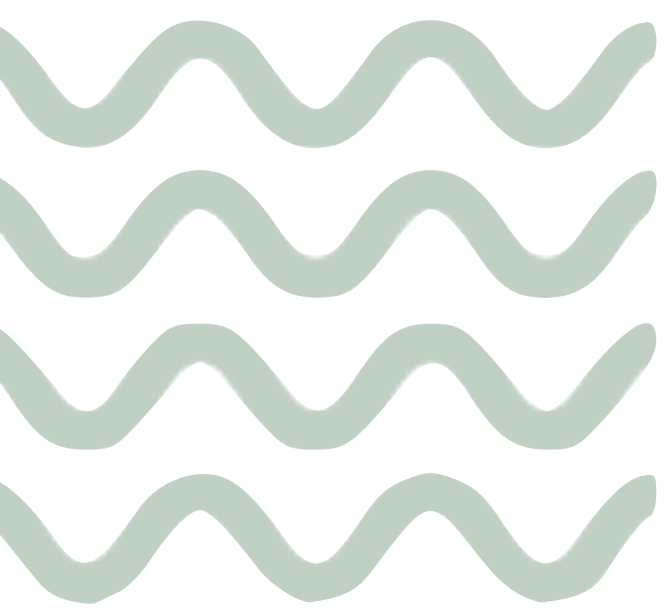
DRAINAGE CANALS

Challenges and Premises

- There is no precise identification (target audience) of who are the citizens who litter in the canals and nearby streets, bringing a relevant challenge to the communication strategy, since it is necessary to "talk to everyone".
- There is no real-time supervision to avoid direct littering on the canals.
- Traditional mass communication, to "talk to everyone", is costly, long-term, and inefficient.
- Create spirit of collective problem: it is not enough "me" not throwing waste in the canal; it takes everyone's attention to solve the problem.

**The study did not dedicate specific methodology to trace the origin of the waste in the canals since the hypothesis of diffuse contamination is strong and finds support in the experience of the local stakeholders.*





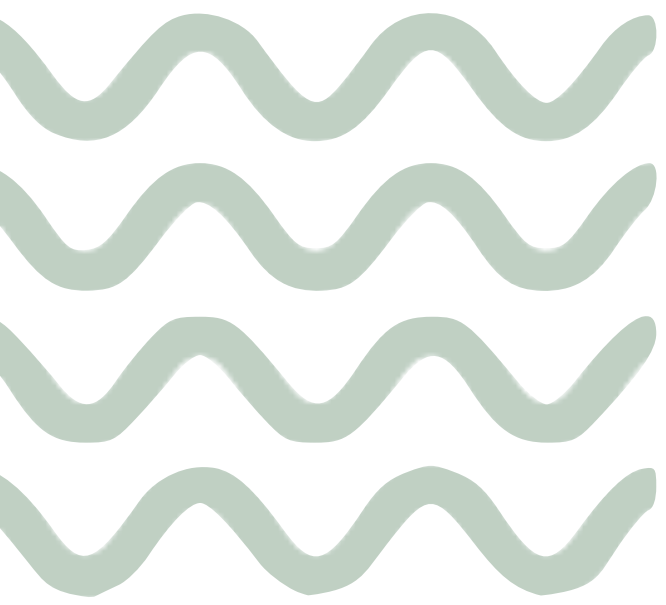
DRAINAGE CANALS

Technical Proposal

BOOMS

A technical solution to mitigate the impacts of littering and therefore pollution in the canals of Santos.





DRAINAGE CANALS

Communication and Engagement Proposal

BOOMS

A technical solution to mitigate the impacts of littering and therefore pollution in the canals of Santos

“MY CANAL, OUR CANALS”

An action to disseminate the booms and mitigate the problem of waste pollution in the canals.

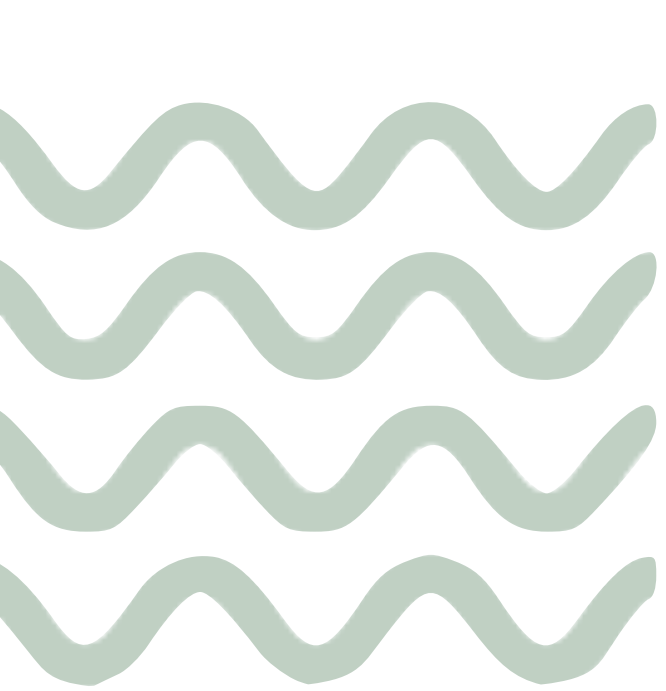
Data Generation and Transparency:

Monthly ranking of waste collection in the booms.



From left to right: Choose a canal / Waste collected monthly ranking / Select a month: November. 30,5kg of waste collected in the canal.





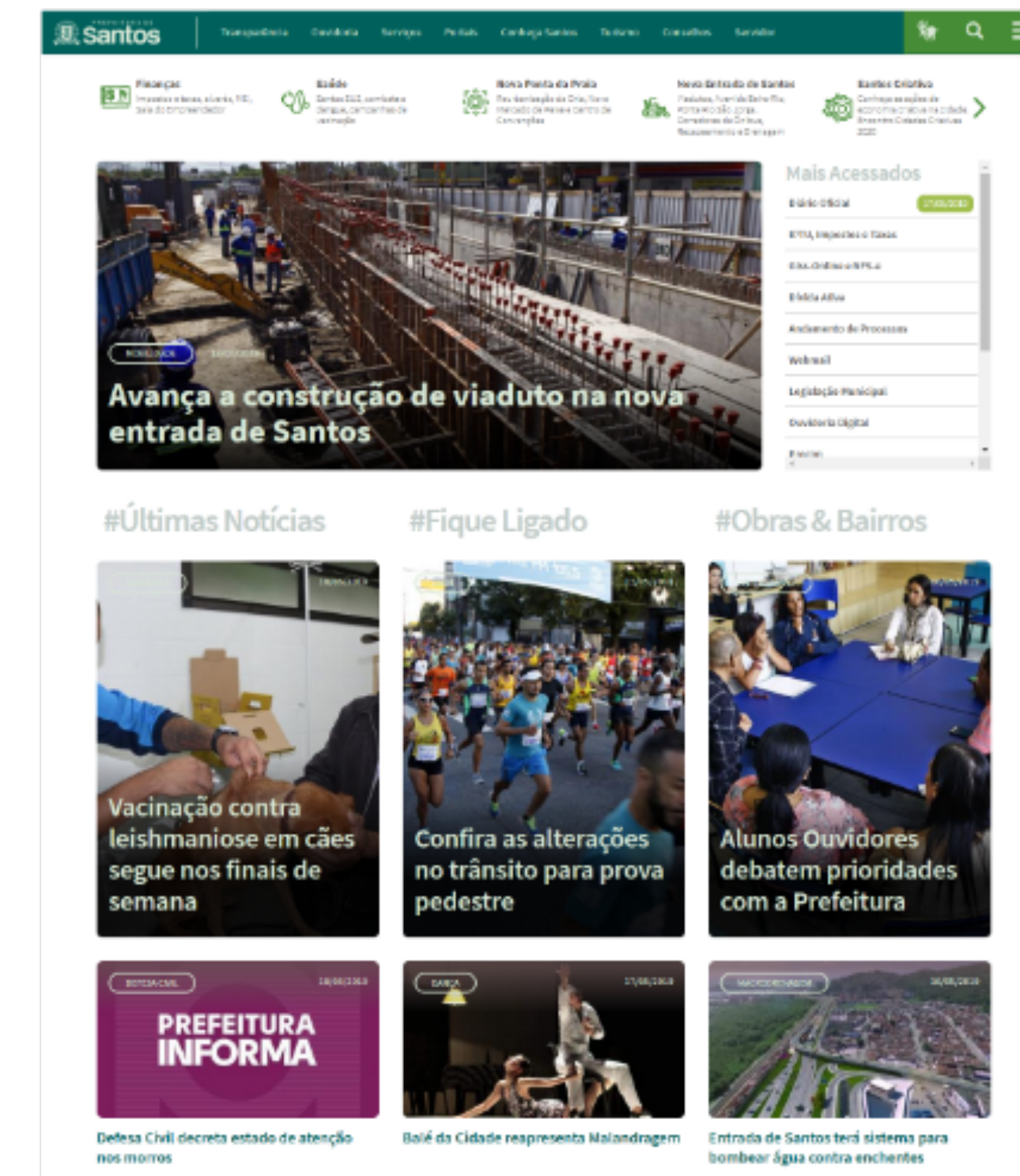
DRAINAGE CANALS

Communication and Engagement Proposal

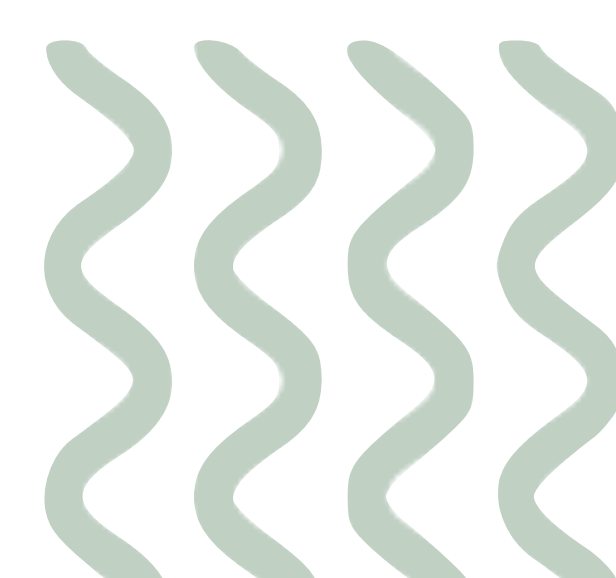
“MY CANAL, OUR CANALS”

The ranking will be a widget of a digital counter to be made available on the city's website, and with the possibility of being embedded by other municipal and private websites (allowing the appropriation of the challenge by society).

With a monthly update and a historical record, the ranking will allow both the population to easily recognize the scale of the problem and engage in the solution, as well as the managers to carry out territorial actions in the most problematic canals.



Ranking dos canais mais sujos de Santos



HOTSPOT #2

.: Palafitas :.

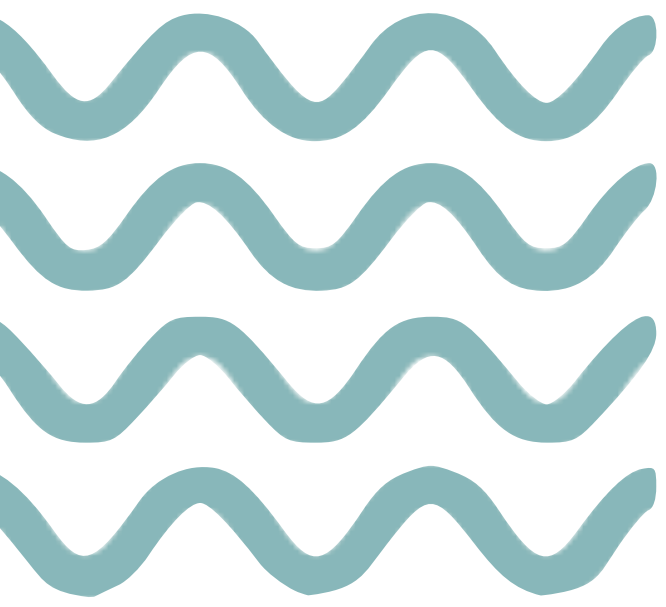


PALAFITAS

Agglomeration of subnormal dwellings that present, among other factors, a situation of **high social vulnerability, precarious urban structure and land irregularity**. This scenario demands that both the proposed technical solutions and the communication strategy take into **account community and income generation logics** as well as the creation of **specific disposal and collection structures**.

WHAT IS FORESEEN IN THE ACTION PLAN

- Booms installation
 - Social-environmental project “Ecological Fisherman”
 - Community waste agent project
 - EcoDike project
- 

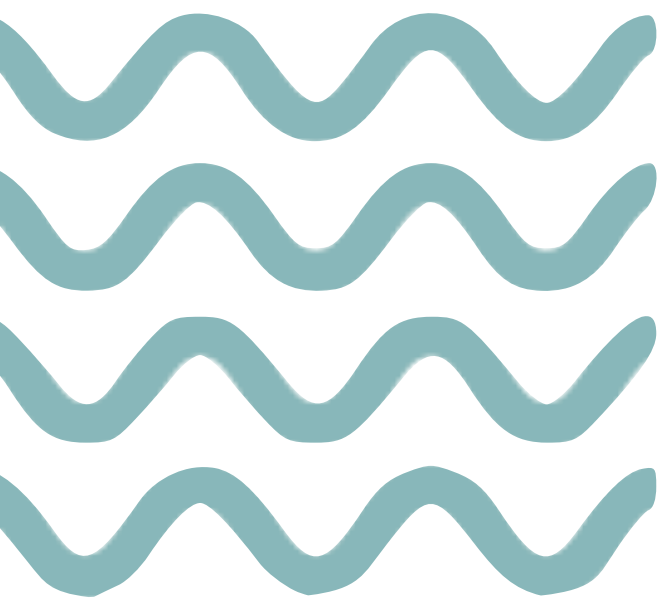


PALAFITAS

Challenges and Premises

- Feeling that individual effort is not worth it, because collective behavior will not change.
- Displacement by narrow alleys (weight + space) - especially for people with reduced mobility.
- Waste accumulation at the entrance of the alley (conflict with neighbors).
- Social dynamics affected by: intense territorial contact + unemployment and vulnerability + alcohol and drugs + presence of organized crime.
- Building bonds and collective spirit.
- Building bonds and collective spirit.
- Sense of belonging: elaboration of content and aesthetics defined together with the local project team and the participating population.
- Need for community logics and income generation.
- Model reference and efficiency: community health agents.
- Need for structural reformulation of waste and collection systems.
- Strength and articulation of female leadership.





PALAFITAS

What the population says about it:

***“The trash bin is not enough.
There's a lot of waste at the
entrance to the alley.”***

Resident of Jardim São Manoel

***“We who visit the houses know that
there are a lot of elderly people who
almost do not leave the house and
cannot walk 200 meters to bring
trash to the main street.”***

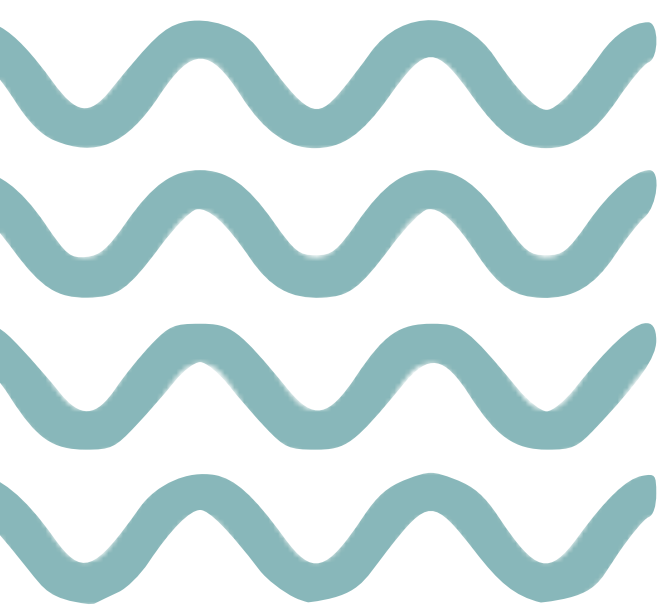
Community Health Agent

***“The correct thing would be to bring
the trash to the bin, but no one does.
Then we become discouraged.”***

Resident of Jardim São Manoel

**Testimonials collected by the project team*





PALAFITAS

Technical Proposal

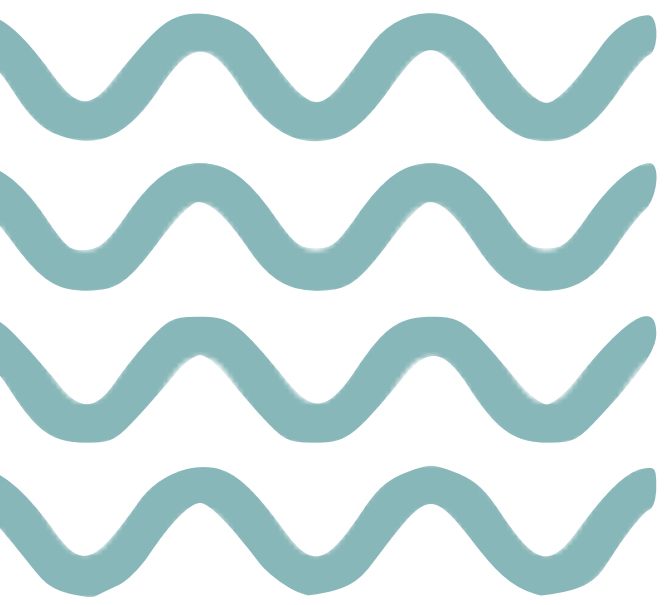
COMMUNITY WASTE AGENT

The Community Waste Agent (CWA) teams will be formed by residents (obligatorily), trained and paid, who will play distinct and complementary roles, distributed on two fronts:

1. Articulation, Education and Engagement of the local community and;
2. Door to door collection of recyclable waste.

** Initially implemented only in selected alleys, to better evaluate the needs of the operation and the good practices that will guarantee the engagement of the population.*





PALAFITAS

Communication and Engagement Proposal

COMMUNITY WASTE AGENT

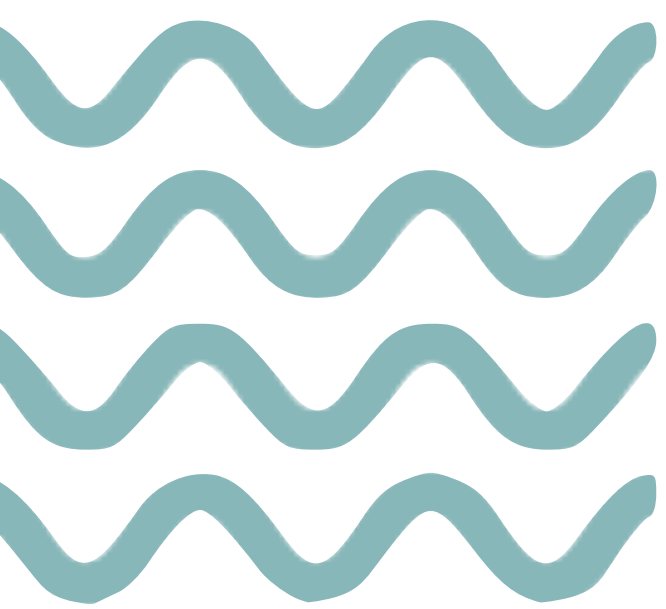
1. Articulation, Education and Engagement of the local community

A work that involves **collective actions**, **distribution of booklets**, **group talks** and **frequent home visits**, based on environmental education and training for the proper disposal of recyclables.

Associated topics for the elaboration of information content and for dialogue with the population:

- Health.
- Food (fish and other foods from the mangroves).
- Reduction of floods.
- Rat reduction.
- Safety and well-being for children.
- Beach cleaning.





PALAFITAS

Communication and Engagement Proposal

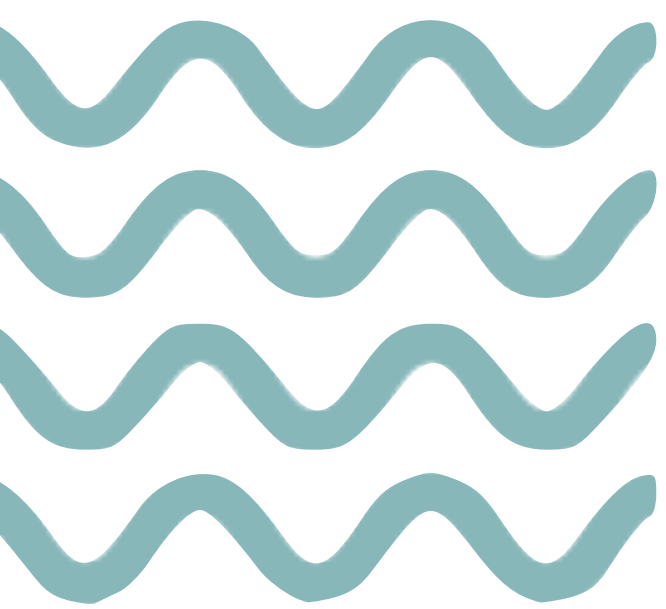
COMMUNITY WASTE AGENT

1. Articulation, Education and Engagement of the local community

The team responsible for this work must be coordinated by women - an extremely important factor in community projects in Brazil - but it will also have collaborators who work in the collection part and other external agents.

The team should wear uniforms inspired by the vests of the community health agents, purple in color (suggestion), with logos of the entities involved in the project.





PALAFITAS

Communication and Engagement Proposal

COMMUNITY WASTE AGENT

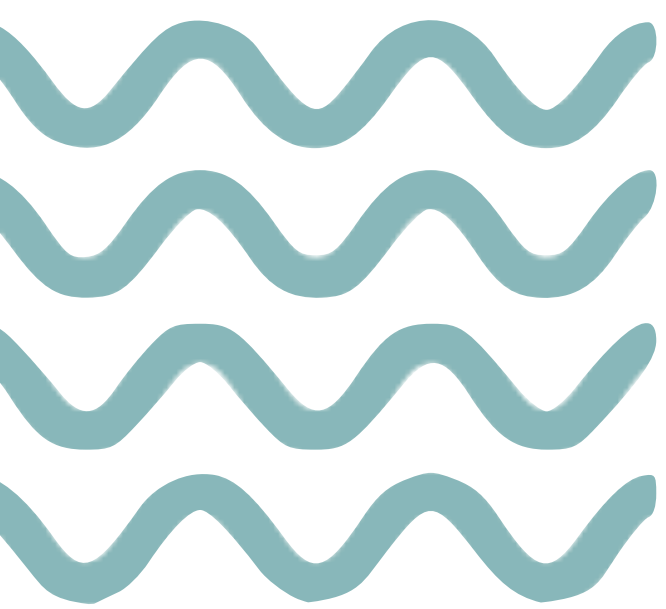
2. Door to door collection of recyclable waste.

The door to door collection will be carried out by a CWA to a predefined alley, previously engaged under action 1.

Agents should wear uniforms and safety equipment such as gloves. Participating households should receive a recyclable waste bin, to be used by residents for source segregation and disposed in a support suspended on the external side of the home only at the moment of collection for proper emptying by the agent.

This action should be prototyped in a pilot project in order to understand the needs and best practices of the operational aspects (number of houses served by CWA, equipment, collection times, etc.) and relationship with the community.





PALAFITAS

Communication and Engagement Proposal

COMMUNITY WASTE AGENT Disclosure

- Selective process for hiring agents (posters posted in the community and local articulation).
- Launching event with the presence of authorities.
- Partnership with NGOs and Associations with local work to present and improve the proposals and for local articulation.
- Uniforms and project materials in use by participants.
- Identification signs (In this house, we separate the recyclable waste for selective collection), t-shirts (I SEPARATE my recyclables) and other materials for the houses and participants.



An aerial photograph of a coastal city, likely Rio de Janeiro, showing a dense urban area on the left, a large green park in the center, and a sandy beach with the ocean on the right. The image has a warm, sepia-toned aesthetic. The text "HOTSPOT #3" is overlaid in the upper left, and ".: Beachfront :." is overlaid in the lower right.

HOTSPOT #3

.: Beachfront :.



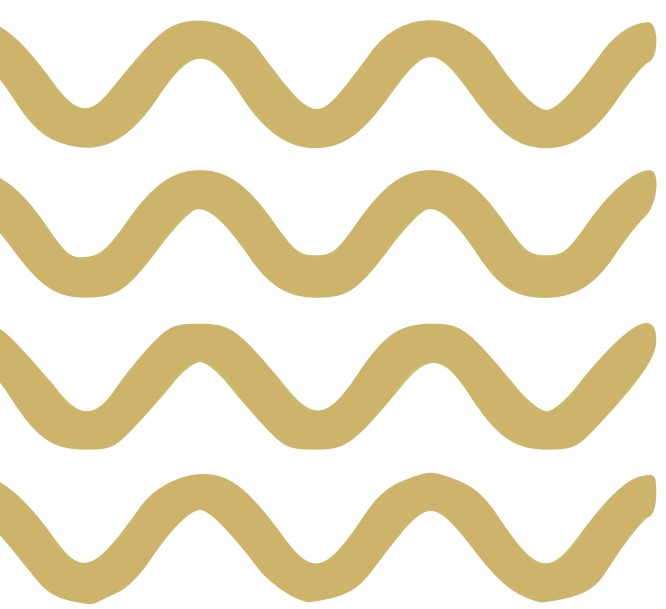
BEACHFRONT

The reduction of inadequate disposal of products consumed on the beach passes through structural improvement and environmental education. However, in order to achieve an effective behavioral transformation and a robust reduction of littering, we must look beyond it and **incorporate social and individual dynamics** into a **disruptive innovation** in structure and language that profoundly changes the relationship of people with waste on the beach.

The theory of disruptive innovation was created by Harvard professor Clayton M. Christensen, who defines it as "a phenomenon by which an innovation transforms an existing market or sector through the introduction of simplicity, convenience and accessibility".

WHAT IS FORESEEN IN THE ACTION PLAN

- Preventive action – potential banning of single-use plastic items
 - Recicla Beach Project (in partnership with wastepickers cooperative)
 - Ecopeixe Environmental Communication
 - Waste containers refurbishment
- 

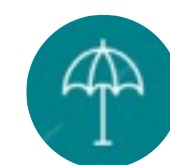


BEACHFRONT

Beach Geographies

With 8 km of extension and a strip of sand with width that varies between 120 and 200 meters. The food and beverage sales (in addition to other products) are carried out by more than 80 kiosks and 300 registered carts.

The beach is organized by zones: in the meeting area of the gardens and the beach are located kiosks and waste containers; in the next zone are the large tents of associations and condominiums; then, a range of 50 to 80 meters of area that is usually unoccupied; getting closer to the water, the food and beverage carts set up their trolleys and offer parasols for the visitors; finally, the zone occupied by people walking by the waterfront.



Parasols zone



Walking zone



Large Tents



Kiosks

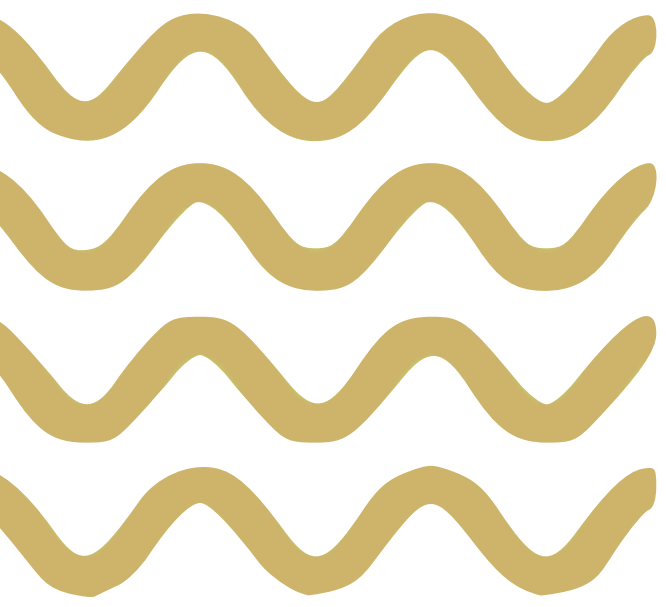


Food & Beverage carts



Waste containers





BEACHFRONT

Waste

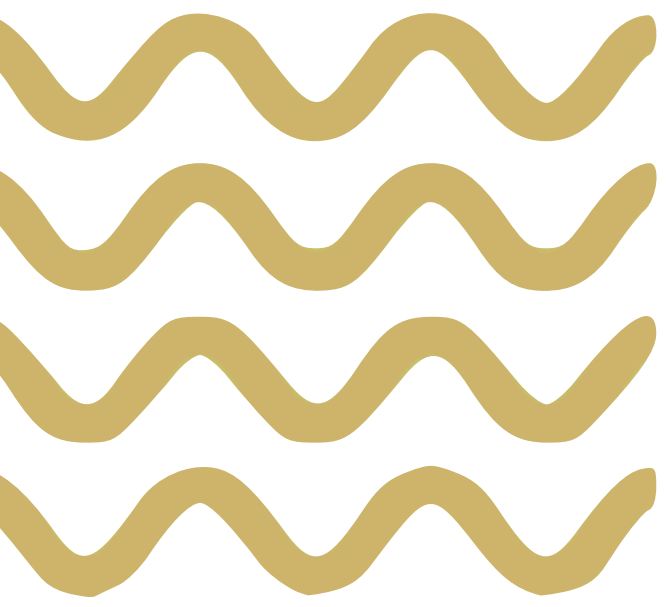
In observations and surveys made by the project, it was detected that a part of the visitors, especially the local residents that go frequently to the beach, bring their own bags for waste. However, much of the waste from beach consumption is discarded around the parasol itself and is collected by food carts employees afterwards.



Beyond the cultural issue regarding littering, the beach provides other **aggravating factors** of a negative behavior in this subject. The distance from the waste containers (sometimes more than 100 meters), the wind that spreads light materials and the excessive consumption of alcohol itself make littering very common.

In addition, one of the main difficulties to change this scenario is that the floating population of the high season is less exposed to continuous environmental education efforts by the municipality.



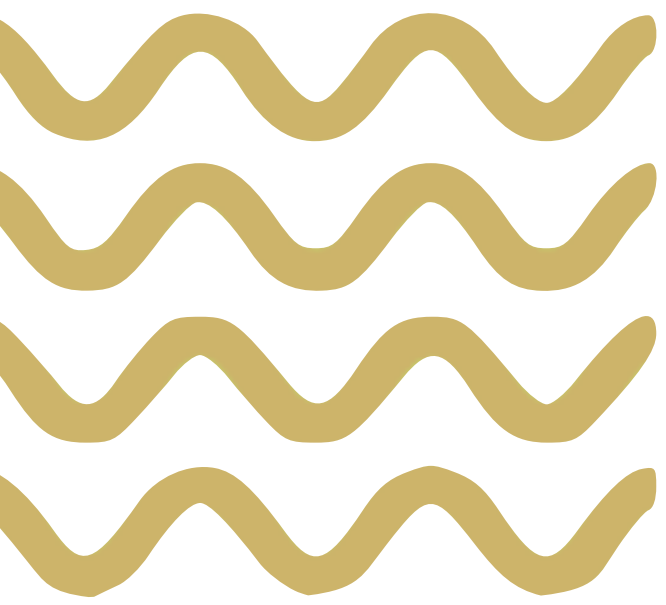


BEACHFRONT

Challenges and Premises

- Distance from the waste containers: in some zones, it can reach 200 meters from where the person is.
- Consolidated behaviors: leave the waste near the parasol for the food cart employee to collect it or to take it off when leaving the beach.
- Lack of responsibility: only a small number of people understand and act on their waste. Good part believes that the problem is not in the residents of Santos, but in the tourists.
- Although the person intends to discard the waste correctly when leaving the beach, winds can spread light materials.
- Cigarette butts deposited in the sand for later disposal are buried or forgotten (waste of greater presence according to the composition study performed).
- Behavior affected by alcohol.
- Tourists are not impacted by awareness-raising efforts throughout the year.
- Agglomeration: during the high season, the beach is frequented by tens of thousands of people. Individual behavior in relation to waste is strongly influenced by mass behavior.





BEACHFRONT

What the population says about it:

“The trash bins are too far”

Beach user

***“I bring my bag, but not everyone
has the same awareness”***

Beach user

***“Lack of supervision. People
throwing trash on the beach
should be fined”***

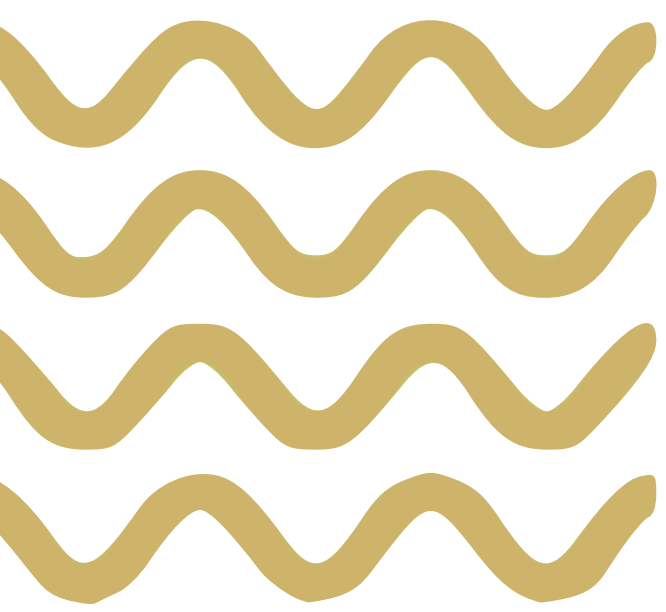
Beach user

***“Two things are
needed: more waste
bins near people and
enforcement”***

Beach user

**Testimonials collected by the project team*





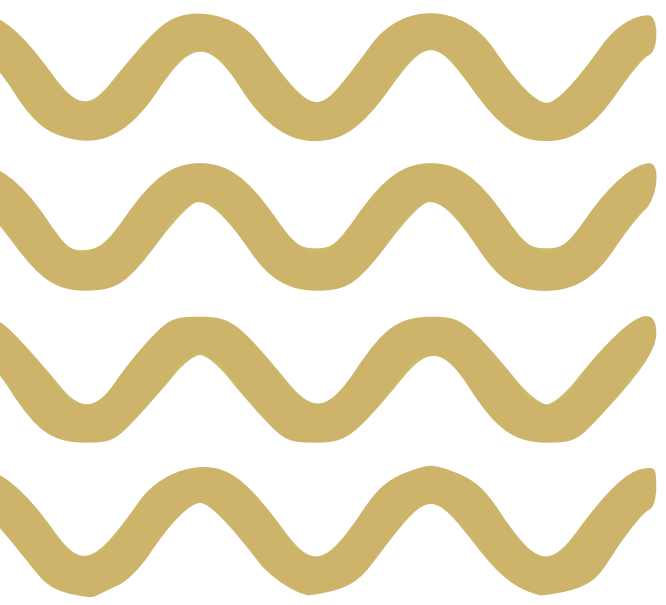
BEACHFRONT

Technical Proposal

Remodeling of the current 240-liter waste containers that are installed next to the edge lighting posts. The proposal is to create 22 islands with four units of 1,000 liters each, two for recyclables and two for residues.

The containers will receive a new identity, as well as the light poles, allowing the discard islands to be viewed from any point in the sand strip.





BEACHFRONT

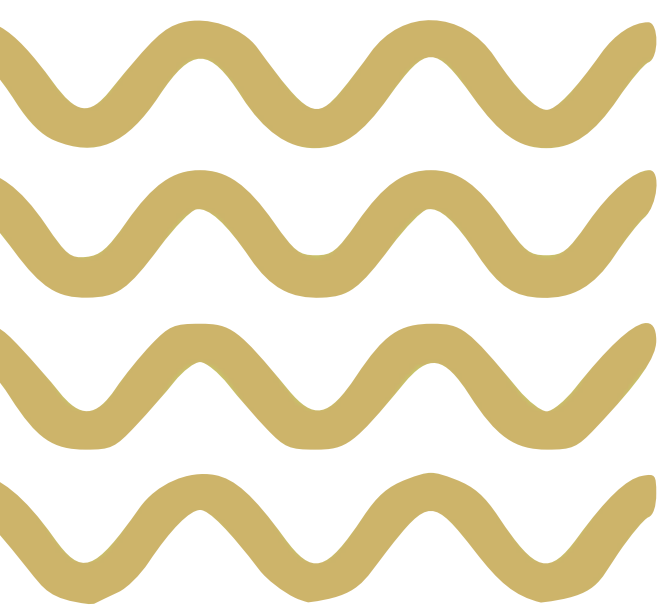
Communication and Engagement Proposal

Based on these complex challenges, a strategy is needed in addition to the awareness-raising activities from environmental education approaches (accessing the rational aspect). Unquestionably, they need to be expanded not only at the time when people are at the beach, but in their other experiences (school and other public spaces).

However, in order to have more expressive results and to create a **WAVE OF TRANSFORMATION** of behaviors, we will need to explore other approaches and languages.

Thus, actions are suggested in three areas:





BEACHFRONT

Communication and Engagement Proposal

**Environmental
Education**
*To know to get
involved*

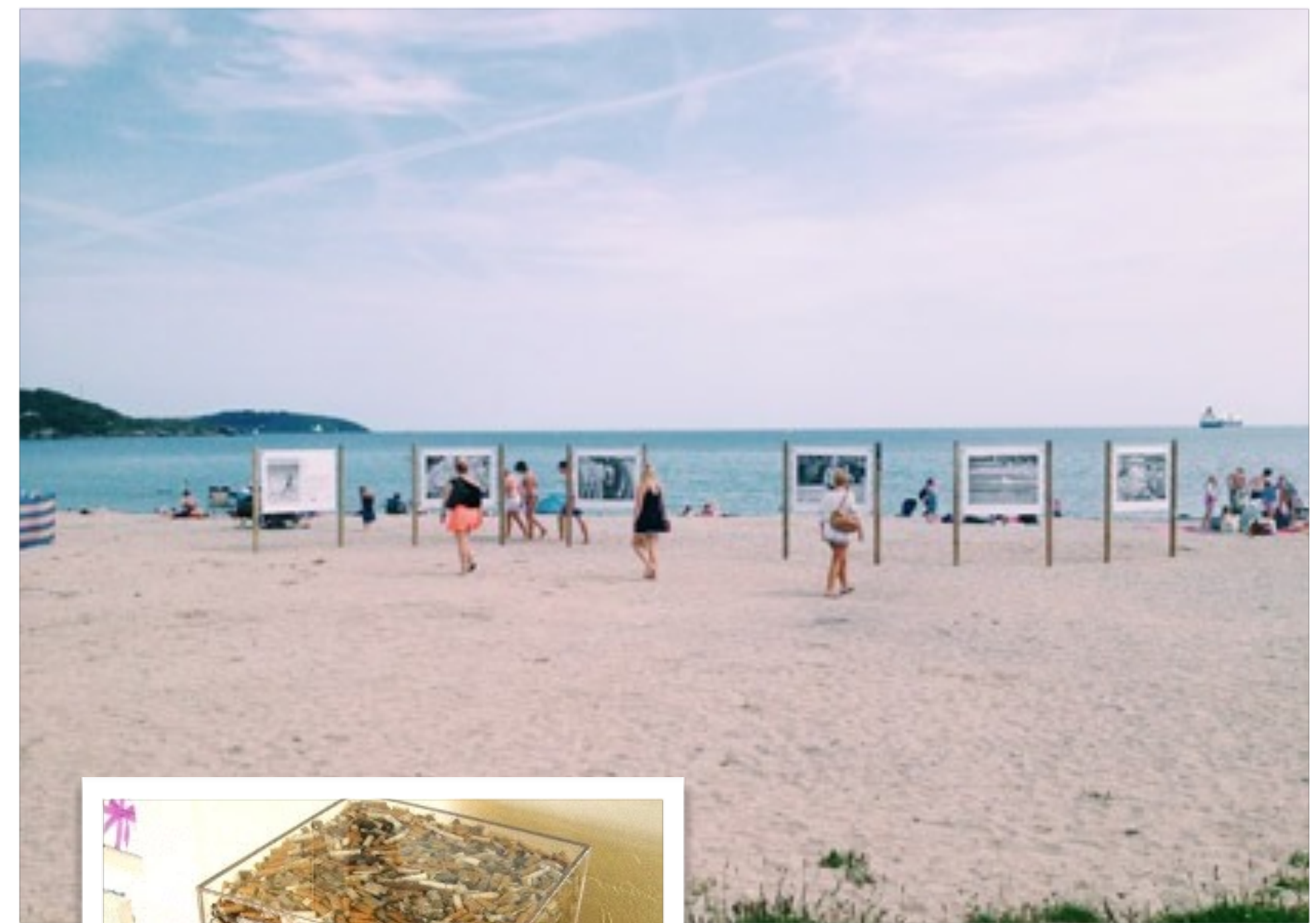
TRASH EXHIBITION

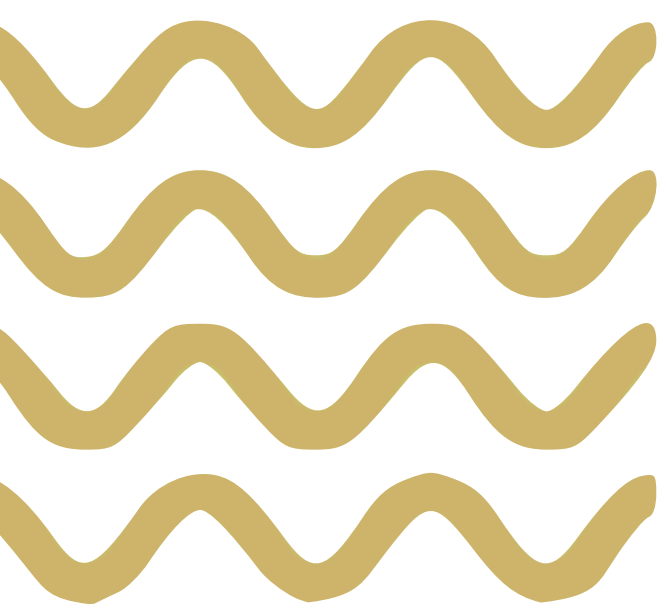
An itinerant exhibition (on the beach) with the main materials found in the waste composition study, with contents on its impacts, degradation time and presence in the items ranking.

The exhibition should be held during the high season, monitored by volunteers, with a calendar planned to cover all the beaches of Santos.

The Trash Exhibition is an action connected to the ECOPEIXE, which is expected to be expanded.

Illustrative images





BEACHFRONT

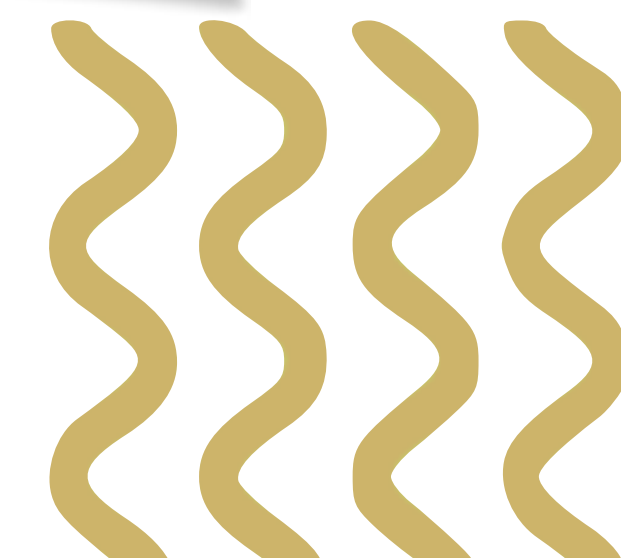
Communication and Engagement Proposal

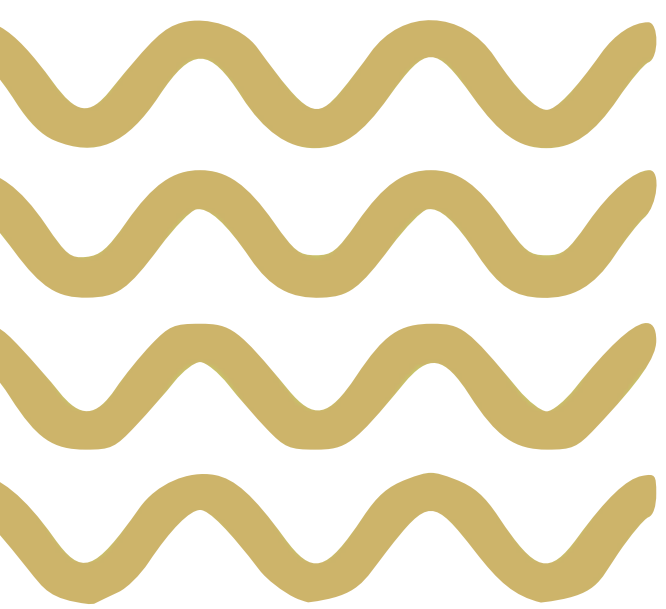
**Environmental
Education**
*To know to get
involved*

ECOPEIXE

Refurbishment of the (already existing) ECOPEIXE - a recyclable waste bin in fish format.

Because ECOPEIXE is a permanent and attractive installation, it plays an important role in reinforcing the idea of correct disposal, especially with children. Thus, it should be included in the new stage of actions and communication, being adapted with the project's identity.





BEACHFRONT

Communication and Engagement Proposal

**Playful
Supervision**
*New relationship
dynamics*

FISCLOWNS

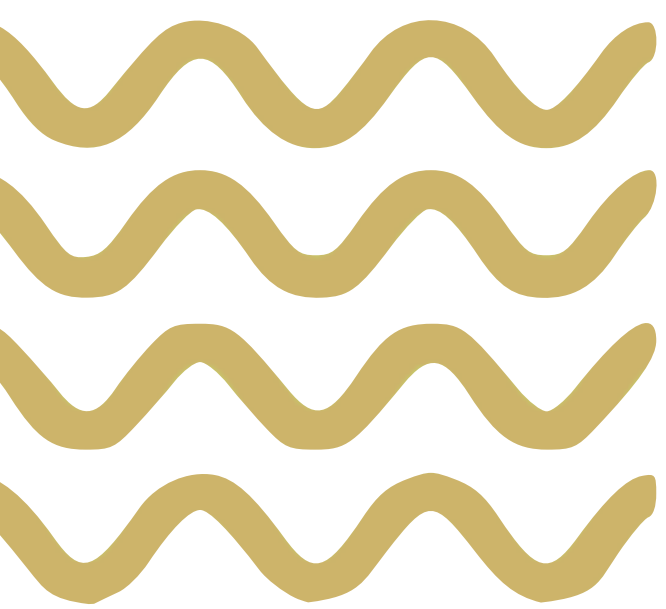
An action that meets the demand for inspection, however, with a non-punitive approach - but educational and fun instead.

In partnership with local theater groups, the action aims to draw attention to the inappropriate disposal (voluntary and involuntary), in which the “clowns” walk along the beach and approach in a fun and noisy way the users, pointing out waste deposited in the sand. In addition to explaining the problem, they should play tricks, such as the "signs of shame" (internet meme in which people take photos of their pets or children who did some mischief, with an explanatory card).



Internet Reference





BEACHFRONT

Communication and Engagement Proposal

Convenience

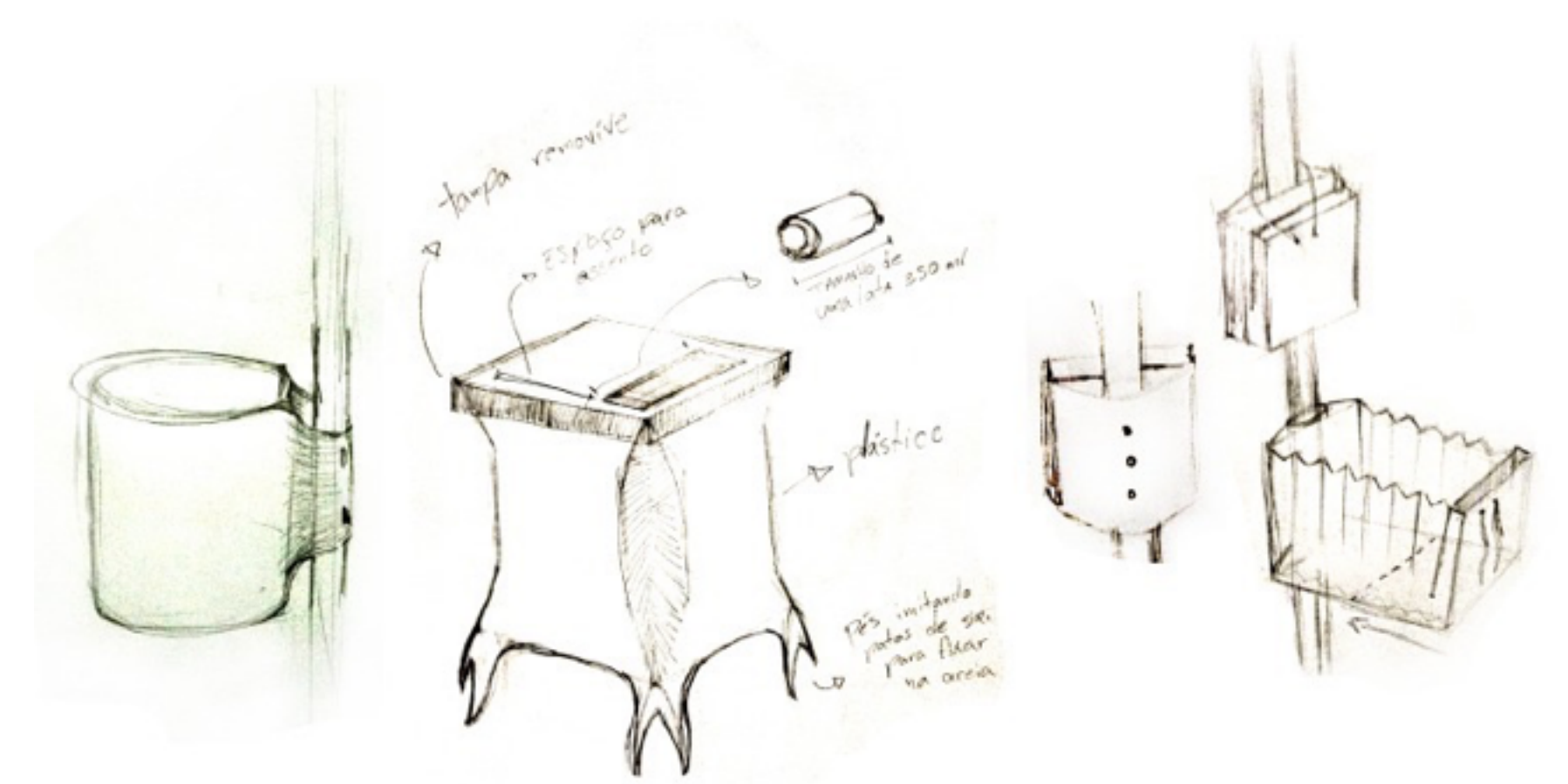
A new beach experience

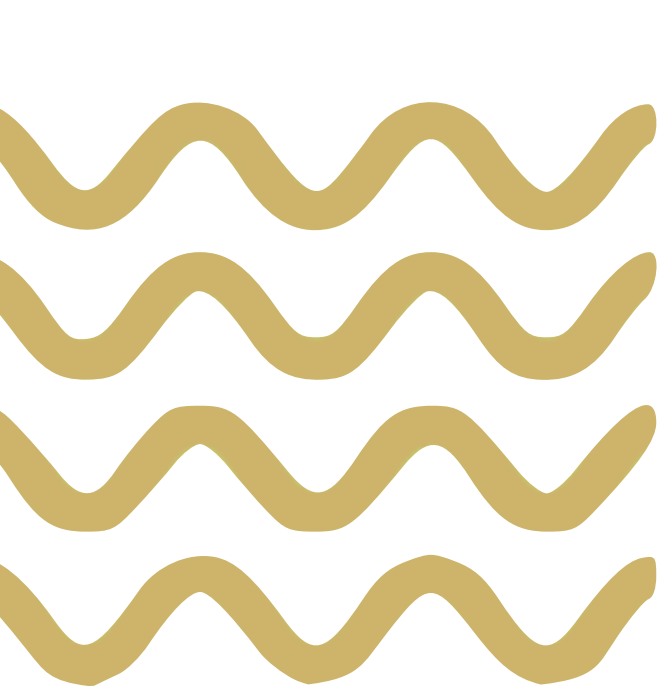
NEW WASTE BINS – A NEW BEACH EXPERIENCE

To create a new experience that has a significant impact on reducing littering, we must explore **DISRUPTIVE INNOVATIONS** that alter the current context.

For this, the suggestion is to implement a **DESIGN THINKING** process, with deep study of beach behaviors and creative development and multidisciplinary solutions. The ultimate goal is to create a process of repositioning waste bins, reducing people's distance to the correct disposal.

This process will be implemented as a pilot project, in partnership with some food and beverage carts, where it should be evaluated and improved, both in logistics and operational aspects, as well as in acceptance and communication with the population.



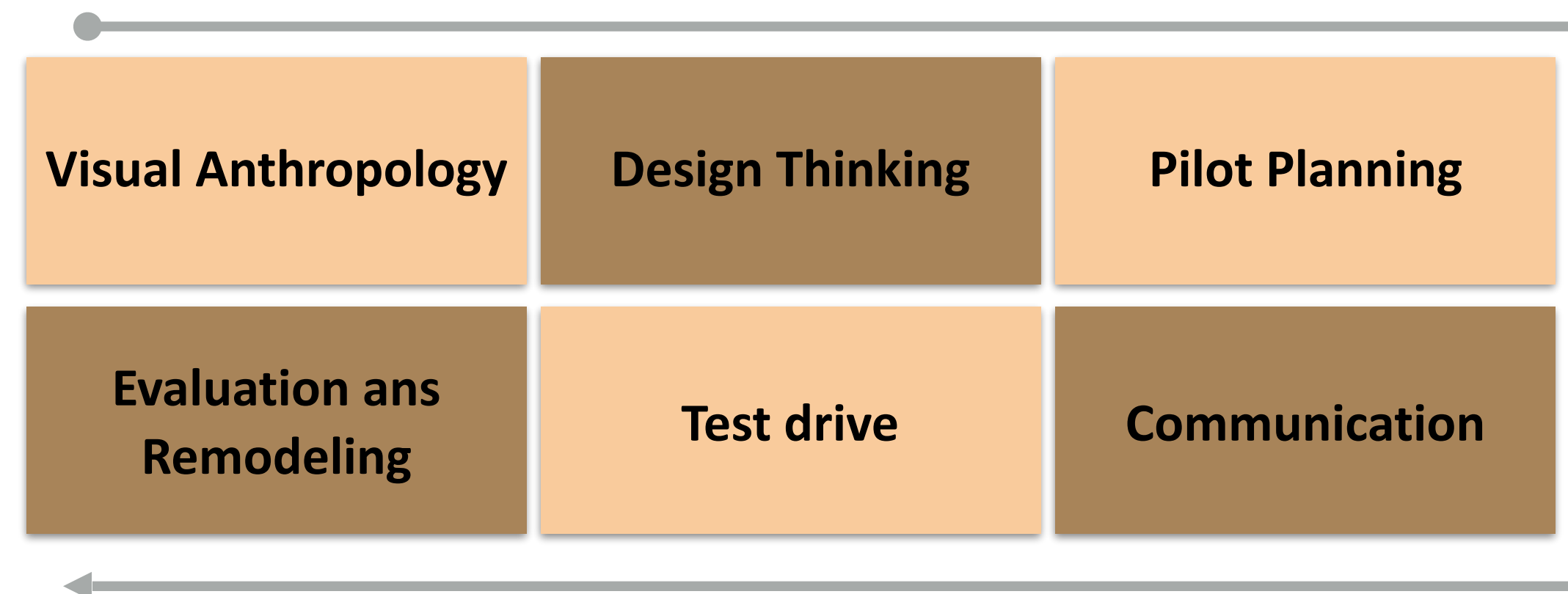


BEACHFRONT

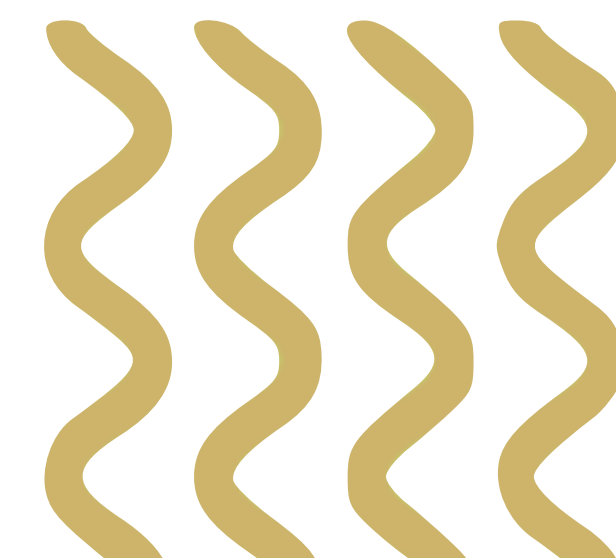
Communication and Engagement Proposal

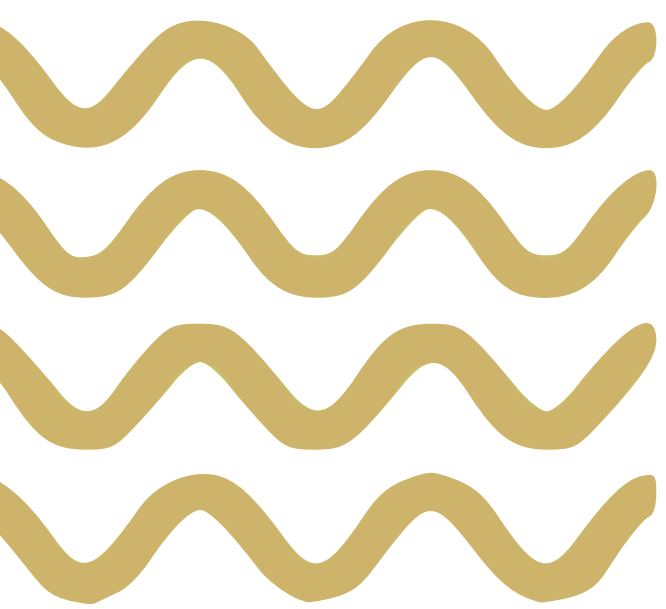


A TRANSPARENT AND COLLABORATIVE PROCESS



The development of this solution goes through several phases, synthetically described above. Communication and dialogue with the population must be constant, both for the search for improvements and for the general awareness of the problem.

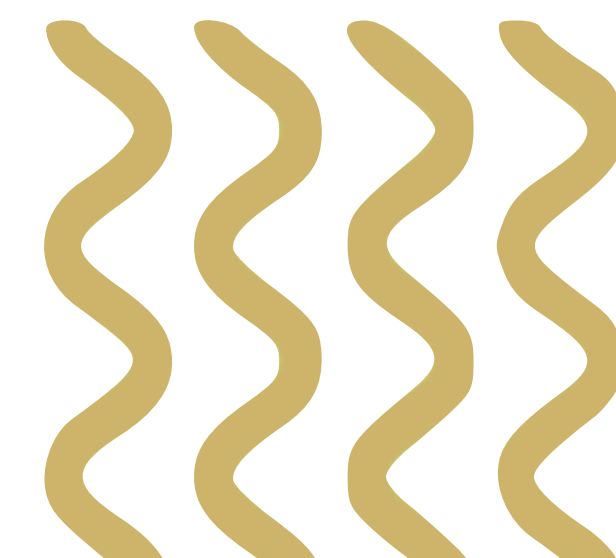




BEACHFRONT

Communication and Engagement Proposal

To communicate the actions on the beach and the project as a whole, it is suggested to make t-shirts to be used by the food and beverage carts' employees. The initial idea is to utilize the daily and sprayed presence of these persons across the beachfront as mass media for visitors. In a second moment, with specific training and the implementation of new waste bins, they should be seen as environmental agents of that territory.





COMBATE ÀS FONTES DE
POLUIÇÃO MARINHA POR
RESÍDUOS SÓLIDOS