



site entretramas



<https://www.entretramas2023.com/>





hello, do you remember us?

we are the students from fgv who aimed to get to know the mangroves and understand them through affection.

that's why we met when we were out there!
we are sending this letter to express our gratitude for all the teachings during our visit.

your contribution to the challenge was essential, and your enchantment, respect, and affection for this ecosystem were transformative for us.

in this envelope, we are sending a copy of our final affective cartography that has a little bit of you in it!

we hope you like it, and once again, thank you very much!

best regards,

ariel levi, bruna novaes, camilla myrrha, carolina kipnis, diogo ascariz, helena machado, josé oliveira, letícia fagundes, laura andrade, luiza lutfalla, maria clara secall, marianna buainain, nicole sanseverino, nicholas santim, reñan kenji, rodrigo crescenzo, thiago cleto e vitória beccato





2021
2030

Década das Nações Unidas
da Ciência Oceânica para o
Desenvolvimento Sustentável

On December 5th, 2017, the United Nations declared that the Decade of Ocean Science for Sustainable Development would be held from 2021 to 2030.

This Decade aims to build a common framework to ensure that ocean science can fully support countries in implementing the 2030 Agenda for Sustainable Development.

The Decade provides a unique opportunity to create a new foundation, through the science-policy interface, to strengthen the management of our oceans and coastal areas for the benefit of humanity.

The affective cartography of the Entretramas group will be available on the UNESCO platform as a public contribution to the dissemination of ocean culture and awareness of the importance of preservation and knowledge about mangroves.



Década da
Ciência Oceânica
BRASIL



preconceptions about the mangrove...

talks with a gvniano



The Entretramas group interviewed 11 students from the Getúlio Vargas Foundation to understand their preconceptions about the mangrove ecosystem.

Two main questions were asked, allowing the students to reflect on their relationship and knowledge of the mangrove: What does the mangrove mean to you? and How does the mangrove affect you?

Through these questions, it became clear that, regardless of whether or not they were familiar with the mangrove, a significant number of people still believe that the ecosystem has no relation to their existence or maintenance – in other words, it does not affect them.

preconceptions about the mangrove...

...what is the mangrove for you?



"An important Brazilian biome."

"A native Brazilian biome common in coastal areas."

"To me, it's the meeting point of fresh and saltwater."

"I think of a dense thicket."

"A thicket with water."

"A school trip."

"Mangrove is a type of plant, and mangroves are several of these plants together."

"A very important ecosystem for reproduction."

"An ecosystem with vegetation and such."

"A super important biome for Brazil."

"It's a transitional vegetation with a lot of biodiversity."



preconceptions about the mangrove...

...the mangrove affects you?



- "Not directly, but indirectly, yes, in some distant food chain."
- "Not directly, but indirectly, through the economy generated by the exploitation of fish and crabs in the region."
- "It brings back memories of when I was little and visited it on a school trip."
- "It must have an effect for sure, in the way nature flows, I just don't know exactly how."
- "No."
- "No."
- "No."
- "Yes, it is essential for the maintenance of species and life itself."
- "No."
- "I don't know exactly, I just know that it has a significant environmental impact."
- "It doesn't affect me directly because I don't live in it, but it is very important for society."



The Cargill logo features a green leaf icon above the word "Cargill" in a bold, italicized, black sans-serif font. A registered trademark symbol (®) is located at the end of the word.

Cargill®

"constructions in mangrove areas will have to be demolished."

"[...]The ICMBio technicians stated that in the area, residences, sheds, extensions of houses, and recreational areas can be found. [...]Mangroves are classified, by environmental legislation, as Permanent Preservation Areas (APP) due to being an ecosystem of great importance for biodiversity maintenance. Highly threatened by the uncontrolled expansion of urban settlements, mangroves serve as a kind of nursery for various species."

fonte: [clique aqui](#)

"govern wants to abolish protection for mangrove and coastal sandbank areas."

The Ministry of Environment is about to overturn a set of resolutions that currently define the permanent protection areas (PPAs) for mangroves and coastal sandbanks along the Brazilian coast. The repeal of these rules opens up space for real estate speculation in the beach vegetation strips and the occupation of mangrove areas for shrimp production. The government's argument is that these resolutions have been encompassed by subsequent laws, such as the Forest Code. However, environmental experts assert that these resolutions are still in effect because they are the only legal instruments that effectively protect these areas.

fonte: [clique aqui](#)



"irregular constructions are being removed from the surroundings of via mangue."

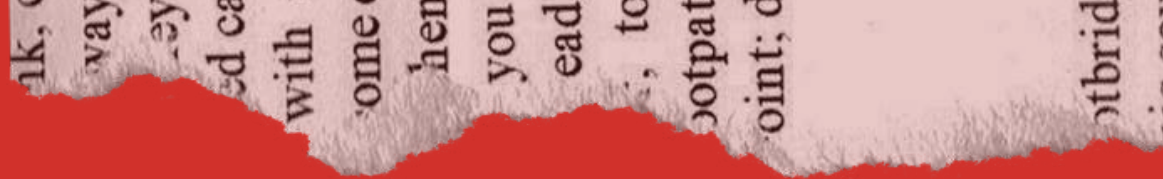
An action carried out by inspectors from the Municipality of Recife removed irregular constructions in an environmental preservation area. The work was conducted by the Urban Control Directorate (Dircon) on Tuesday (12) in the vicinity of Via Mangue, an expressway that connects the South Zone to the city center. According to Dircon, wooden huts erected in the mangrove area were removed. There were no people living in these makeshift properties.

fonte: [clique aqui](#)

"luxury chain st. regis opens suspended hotel over the mangrove in riviera maya."

"[...]Built in a suspended manner over a mangrove, the new resort features a circular exterior design inspired by the Pleiades constellation and offers privileged views of the sea. The different sections of the hotel are connected by elevated walkways. [...] The nature reserve, in fact, surrounds the property and is listed as a UNESCO World Heritage site."

fonte: [clique aqui](#)



the mangrove



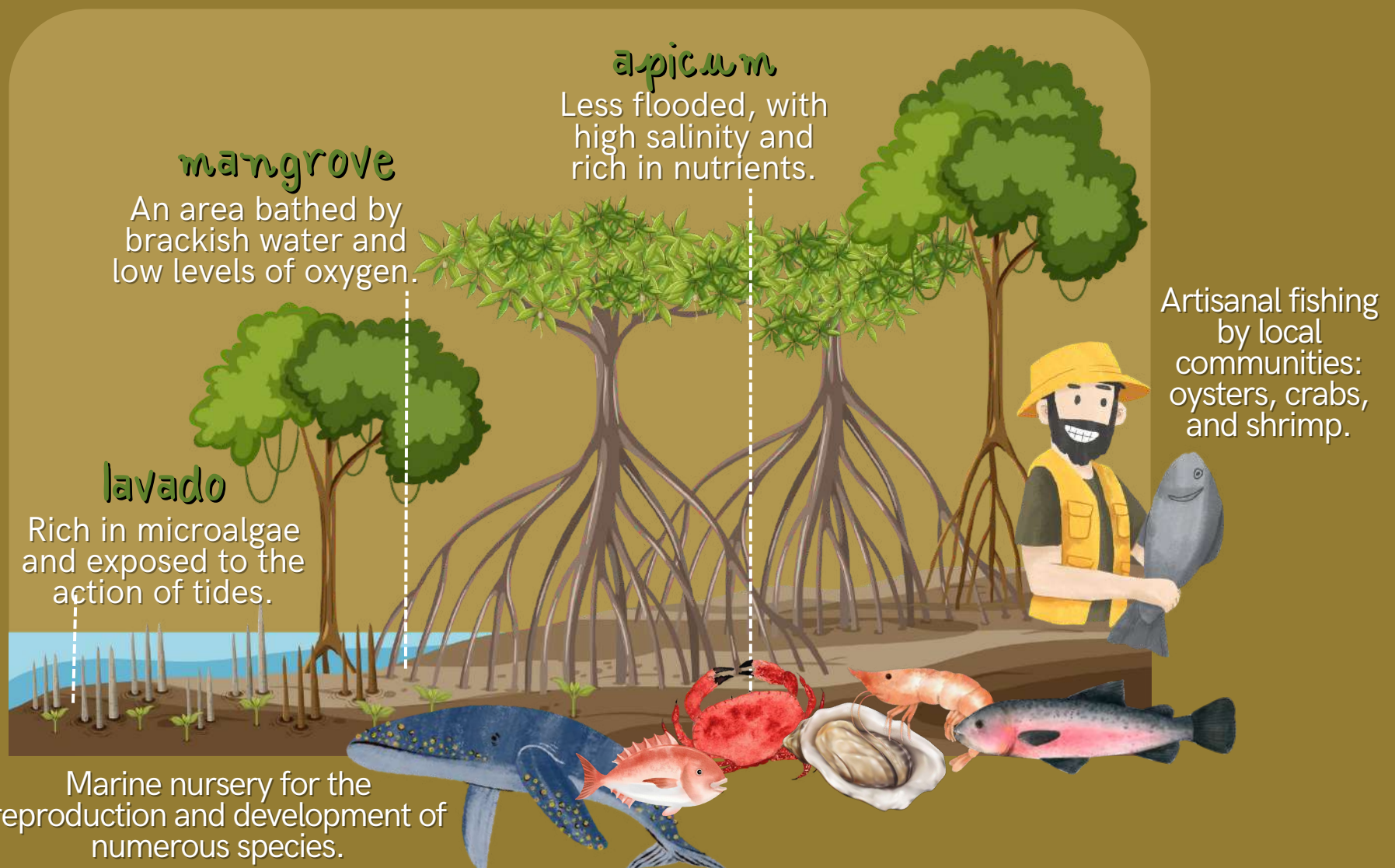
Red Mangrove
(*Rhizophora mangle*)



White mangrove
(*Laguncularia racemosa*)



Black Mangrove
(*Avicennia schaueriana*)



ecosystem services provided by the mangrove

DEFINITION: Ecosystem services are the structures or biophysical processes that provide well-being to the current and future human population, and are characterized by the inherent functions of ecosystems.

There are 4 categories of ecosystem services, which:

provision services

They are defined by the products obtained directly from ecosystems, such as wood, food, natural medicines, and ornamental resources.

support services

They enable the occurrence of other ecosystem services, such as soil formation, primary production, photosynthesis, and nutrient cycling.

regulatory services

They are defined by the benefits derived from the regulation of ecosystem processes, such as climate regulation, air quality maintenance, regulation of human diseases, prevention of natural phenomena, and protection against tidal inundation.

cultural services

They are defined by the benefits derived from spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences, as well as outdoor sports activities, diverse lifestyle choices, and educational activities in non-formal spaces.

ecosystem services provided by the mangrove

artisanal fishing and sport fishing: income generation

academic and scientific study opportunities

Food security: consumption of fish and crustaceans.

Carbon dioxide (CO₂) storage and removal: natural filter.

protection of the oceanic coast against the advance of the tides

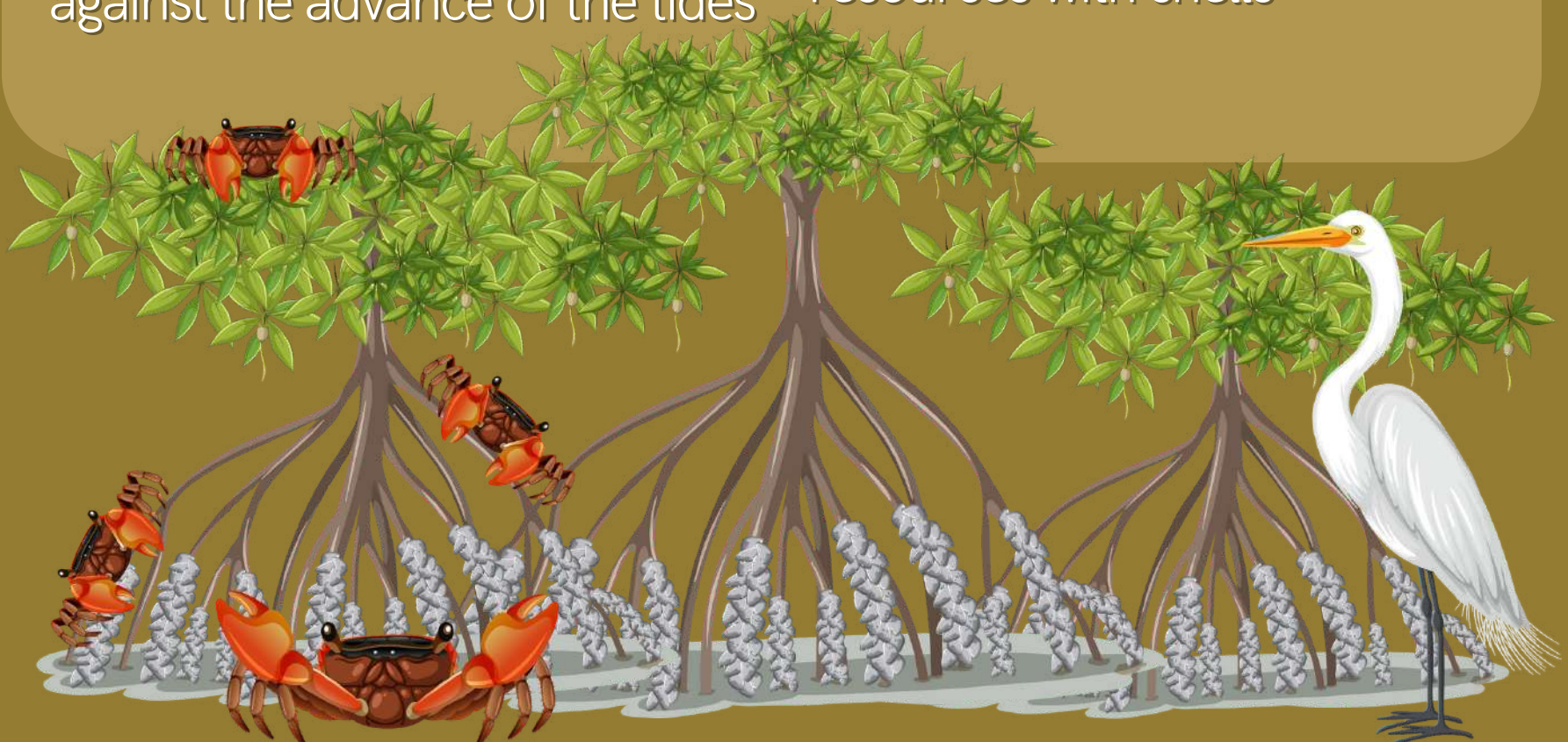
minimization of the effects of greenhouse gases

recreational opportunities: community-based tourism and ecotourism

soil erosion control

global climate regulation

production of ornamental resources with shells



food web in a mangrove



the school boat

Mais informações: [clique aqui!](#)

The "Arca do Saber" School Boat, a project of the Municipality of Bertioga, is an outdoor school. With a capacity to transport 36 people, it brings together groups of students from public and private institutions for a tour of Bertioga's environment.

Like a true classroom, the passengers learn, through practical activities, about the richness of the municipality's biodiversity, raising awareness about environmental preservation.

It was on this boat that the FIS26 class had their first contact with the mangrove, being able to immerse themselves in the ecosystem through theory and practice. This initiative allowed the group to explore, experience, and understand how the environment we live in functions and where other forms of life inhabit. This fostered care for the ecosystem and their initial affection for the mangrove.



and as we learned, in the mangrove there is...

water

because the tide and brackish water are fundamental bases of the ecosystem.

life

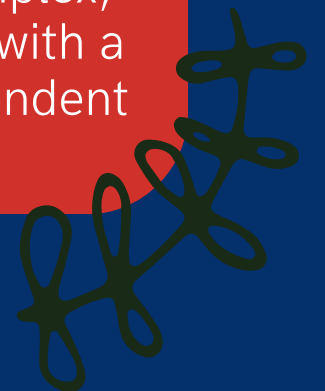
because it is life's nursery. Almost all marine animals spend part of their lives in the mangroves.

mud

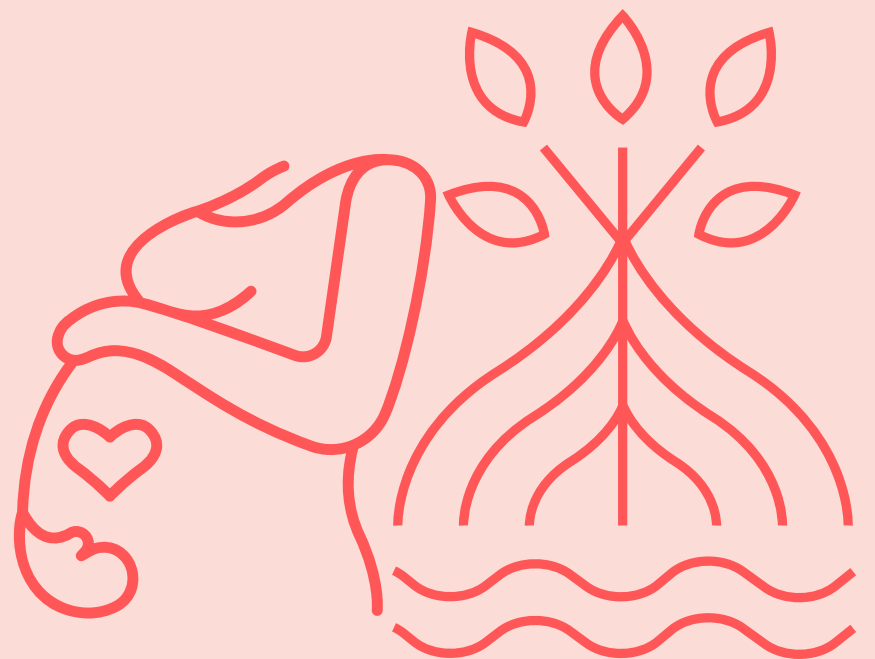
because the muddy soil is home to several beings and it is he who absorbs the nutrients.

web

because it is a complex, twisted ecosystem with a huge and interdependent food web.



not only is it the nursery of the ocean, but also the nursery of our learning. the mangrove, like a mother, provides love, protection, teachings, and care for both humans and non-human beings. it represents the support for life on the planet and the support for the knowledge and affections that have accompanied us throughout our challenge.





"the moon is our boss. if she
doesn't want us to work, we
don't work."

Luís
Mandira,
fisherman.

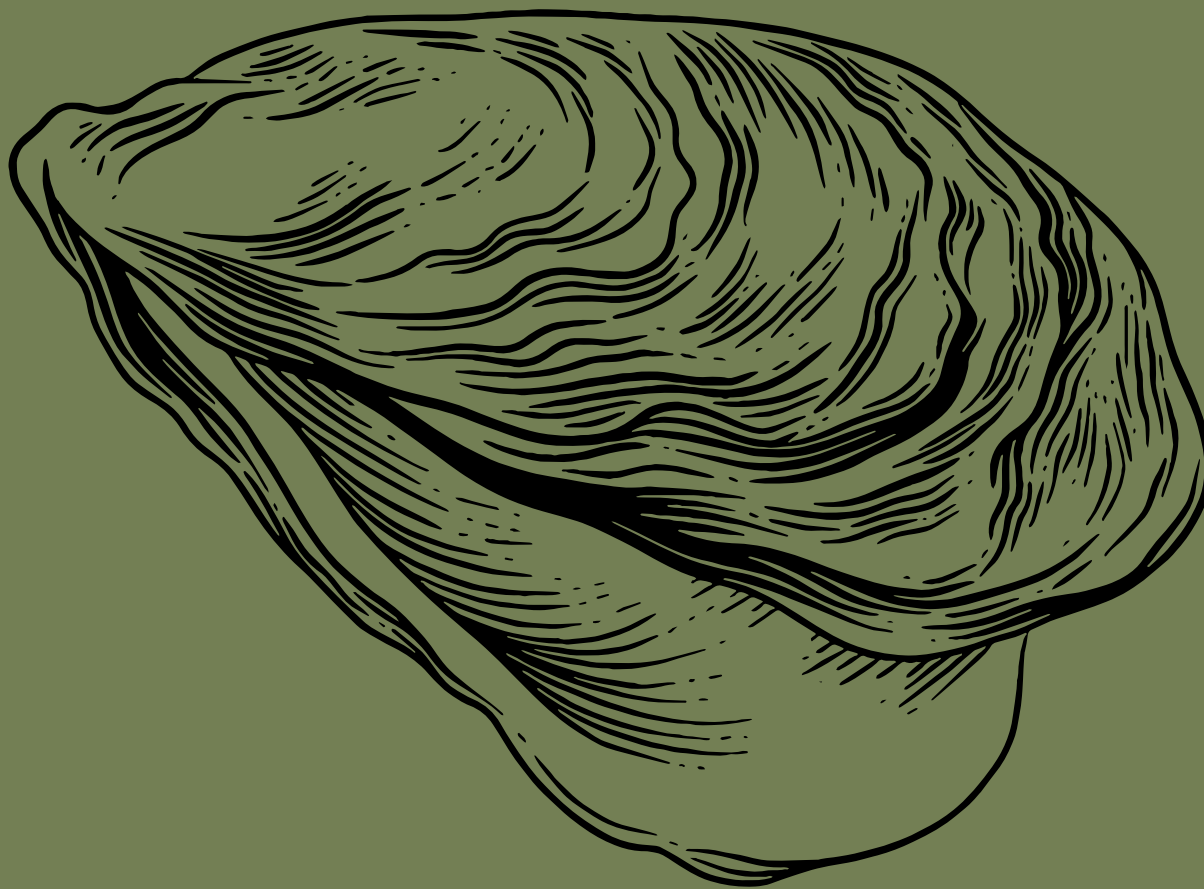


sometimes we
lack more hours
in our day,

but in nature
there's an
abundance.

"if you can look, see. if
you can see, observe."

José
Saramago



what are your filters
to live in a society like
ours?

when empathy towards non-
human beings is lacking, and
humans see themselves on the
other side of the story.



preserve the mangrove (por os cabras de picuí)

I spent my youth fishing in these seas I had
happiness, my feet sank in the mud
Where I fished and earned my livelihood
Provided food for my children and Maria too

But man came silently
And destroyed our mangroves
Now I fish to sustain my fancy
When I cast my net, I pull in nothing but garbage

And now I fish to sustain my fancy
When I cast my net, I pull in nothing but garbage

That's why I say, young man
Don't let the mangrove die
That's why I say, young man
Don't let the mangrove disappear

That's why I say, young man
There's life in the mangrove too
That's why I say, young man
We need to preserve it Bis



(continuation)

But there's still time, young man, to think
We need to preserve our mangrove
Nature will surely be grateful
And there will be fish on your table
To feed your child

Nature will surely be grateful
And there will be fish on your table
To feed your child

That's why I say, young man
Don't let the mangrove die
That's why I say, young man
Don't let the mangrove disappear

That's why I say, young man
There's life in the mangrove too
That's why I say, young man
We need to preserve





"i couldn't stop thinking about how i didn't know that place. it seemed to belong to me in some way. as if the reflection of the trees in the water had already been a part of my life, but it was the first time i encountered it. i was completely enchanted. the mangrove is breathtaking. the movements. the sounds. the living and non-living elements. the life that inhabits it is something to fall in love with. it's magical. it's enchanting."

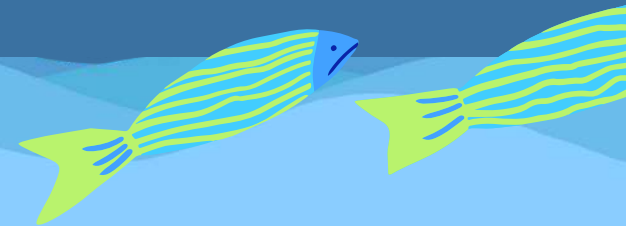
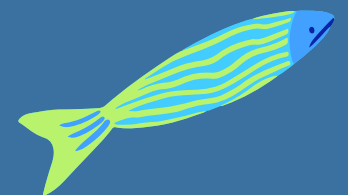
conserve x preserve

part 1

The contradiction between preservation and conservation is a complex issue that prompts us to reflect on the balance between protecting nature and respecting local communities and cultures. While natural parks are designed to preserve ecosystems and biodiversity, they often overlook the human impact on protected areas.

- It is essential to recognize that nature and local communities are intrinsically interconnected. When preserving a natural environment, it is equally important to ensure the well-being of the people who live in and depend on these areas. After all, local communities hold ancestral knowledge, cultural diversity, and sustainable subsistence practices.

Nature preservation should not come at the expense of local communities. It is necessary to establish inclusive dialogue involving stakeholders to ensure that conservation is carried out responsibly and sustainably. It is crucial to consider the needs and perspectives of communities, respecting their rights, traditions, and traditional knowledge.



conserve x preserve

part 2

Natural parks should be spaces of coexistence, where the preservation of nature is in harmony with the social and cultural development of communities.

This implies promoting the participation of local communities in park management, valuing their contributions, and providing economic and educational opportunities.

Furthermore, it is important to invest in capacity-building and environmental education programs for both local communities and park visitors. This allows everyone to understand the importance of conservation and develop a shared sense of responsibility in preserving nature and respecting local cultures.

Therefore, reconciling preservation and conservation requires a collective effort, where the protection of nature and the empowerment of local communities go hand in hand. Only through such an approach can we achieve a sustainable balance that respects and promotes biological, cultural, and social diversity for present and future generations.



mangrove contradictions

part 1

Once upon a time, there was an enchanted mangrove where nature seemed to dance amidst apparent contradictions. In that magical place, chaos reigned, and it was precisely that disorder that made the mangrove flourish.

At the meeting point of fresh and saltwater, a silent battle unfolded. The sea, with its imposing strength, brought the energy of the waves and the vastness of the ocean. On the other hand, the river, calm and serene, flowed peacefully in search of its destiny. It was in this crossroads of flows that the essence of the mangrove was found.

With each change in the tide, the mangrove experienced its own metamorphosis. During high tide, the invasion of saltwater allowed marine life to find shelter and sustenance in that unique ecosystem. However, as low tide approached, a true spectacle of life was revealed. Hidden secrets emerged, creating intricate mazes of roots, twisted trunks, and fertile mud.

It was in this apparent chaos that the mangrove found its harmony. Plants adapted to extreme conditions, extending their roots deeply to seek sustenance.



mangrove contradictions

part 2

The animals, cunning and resilient, navigated between fresh and saltwater, seizing every opportunity to feed and reproduce. And the birds, with their elegance, soared in search of food, spreading seeds and perpetuating life.

The mangrove knew that it depended on this symphony of contradictions to exist. The balance between fresh and saltwater brought the necessary nutrients for its fertility. The high tide and low tide propelled the circulation of life and ensured constant renewal. The mangrove understood that the absence of any of these chaotic elements could disrupt its entire existence.



Thus, the mangrove teaches us an important lesson. Sometimes, it is in chaos that we find true harmony. It is in the combination of opposites, in the merging of disparate elements, that nature finds its life force. And we, as part of this intricate system, can learn to value and respect the diversity and complexity that surround us, knowing that it is in this interaction that we find our own prosperity.

May we always remember that beauty and sustainability of life reside in the meeting of contradictions, just as the mangrove shows us the importance of chaos in finding its harmony and flourishing.



fisherman's tale

part 1

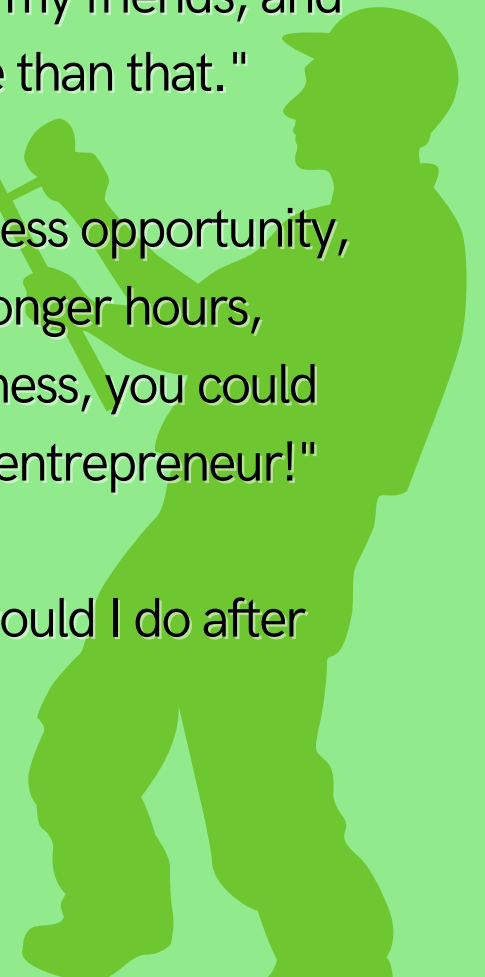
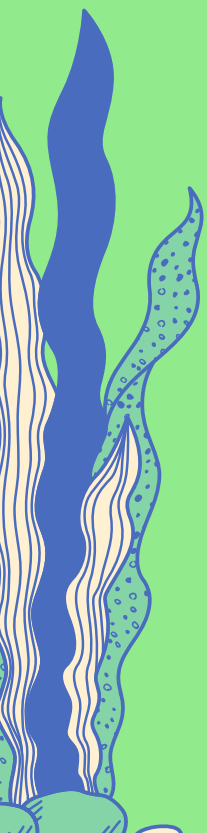
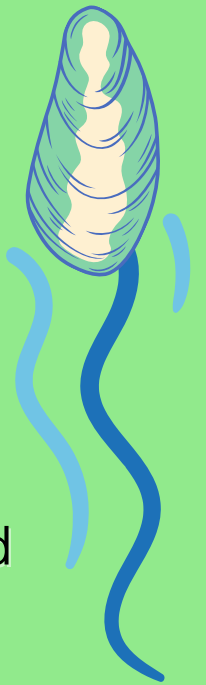
Once upon a time, there was a fisherman who lived in a small seaside village. He had a simple yet peaceful life, spending his days fishing and enjoying the beauty of the sea. One day, while he was out fishing, he came across a businessman who was visiting the village.

The businessman was impressed by the fisherman's skill in catching fish so quickly, and he struck up a conversation with him. Curious, the businessman asked the fisherman why he didn't fish for longer hours to catch more fish and make more money.

The fisherman smiled and replied, "Well, I fish enough to support my family and ensure a peaceful life. I have time to relax, spend time with my friends, and enjoy the beauty of nature around me. I don't need much more than that."

The businessman, thinking he had stumbled upon a great business opportunity, started giving advice to the fisherman. He said, "If you fish for longer hours, hire some helpers, invest in larger boats, and expand your business, you could earn much more money. You could even become a successful entrepreneur!"

The fisherman reflected for a moment and asked, "And what would I do after becoming a successful entrepreneur?"



fisherman's tale

part 2

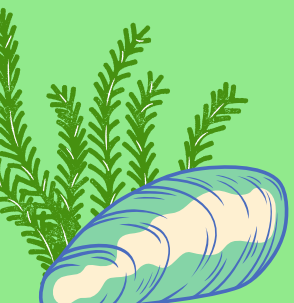
The businessman replied, "Well, you could relax, spend time with your family, enjoy life, and do whatever you want."

The fisherman smiled again and said, "But I already do all of that. I don't see the need to become an entrepreneur to achieve what I already have. I prefer to live a simple and happy life."

The businessman was taken aback by the fisherman's response. He realized that often we are so focused on pursuing more money, power, and success that we forget to value the simple and precious things in life.

From that encounter, the businessman began to reconsider his own choices and priorities. He learned from the fisherman that happiness is not solely found in material success but also in appreciating the little things, having free time to enjoy life, and finding a balance between work and leisure.

And so, the fisherman and the businessman went their separate ways, each seeking their own definition of happiness. The fisherman continued to enjoy his simple life in the seaside village, while the businessman embarked on a journey of self-discovery and the pursuit of deeper meaning.





"I am the last generation
of artisanal fishermen in
my family."

Statement made by an artisanal fisherman
in a Roundtable discussion in Peruíbe

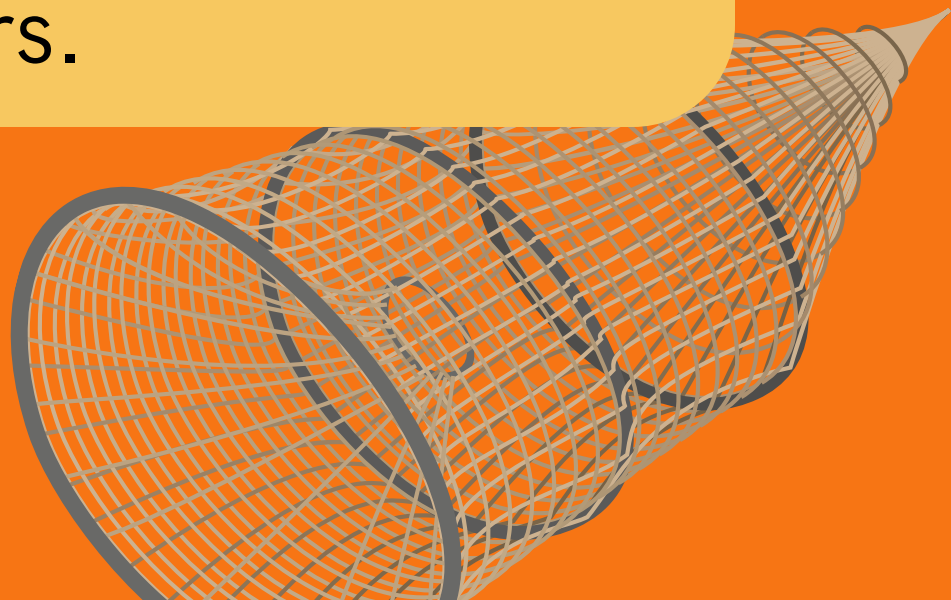
It is a testimony that the new generation
no longer sees fishing as a viable means of
providing a dignified livelihood for their
families.



"i feel like a thief in my own land."

Statement made by an artisanal fisherman in a Roundtable discussion in Perúibe

The fishermen are often detained by authorities who do not inspect large fishing vessels and intimidate small local producers.





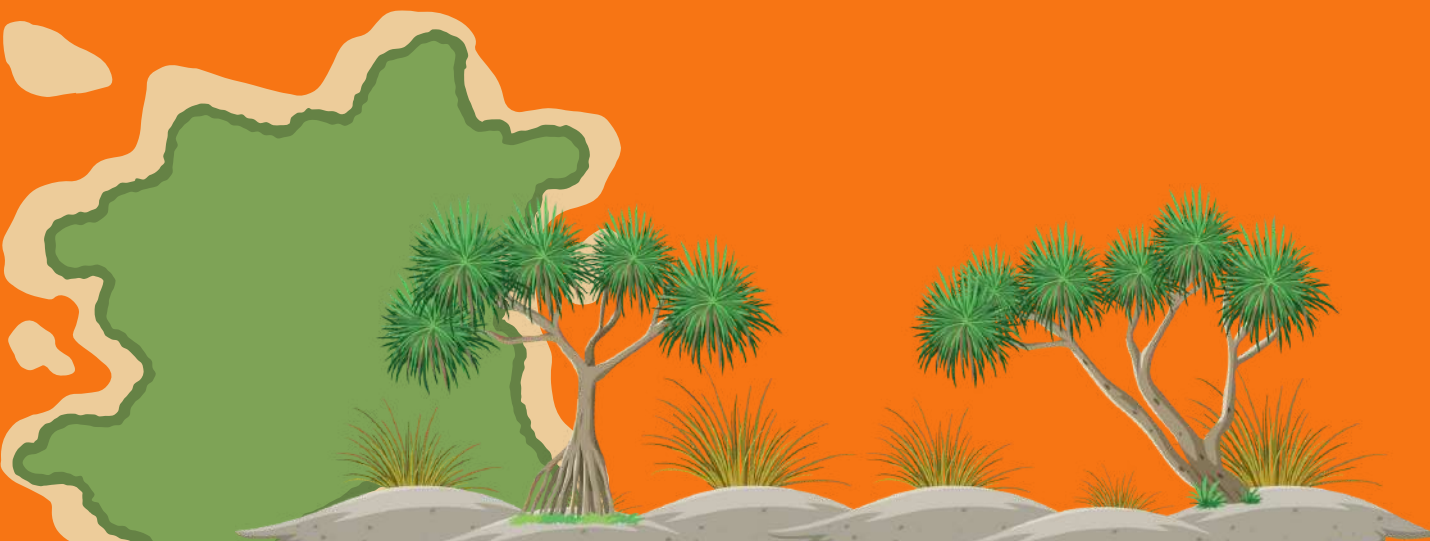
"i work in the mud of the mangrove. i am black, and i take great pride in it."

The representative of Quilombo do Mandira recalls how he and his colleagues were treated as inferior because they were Black and worked in the mangrove. Now, they have international awards and a well-established community.



"the mangrove is the farm
given by jesus to the
poor."

The mangrove is the source of livelihood
for us, the poor. It provides us with
everything we need to work and survive.





"being a fisherman
is a quality of life."

Phrase said by a cast net fisherman in a conversation circle in Peruíbe.

"The more experienced fishermen express a strong connection and affection for their daily diet, knowing the quality of the ingredients they consume and being in close proximity to nature."

sustenance of lives

However, the value of the mangrove transcends its practical function. It is a living testament to the interconnectedness between ecosystems and humanity.

The communities living in the vicinity of these mangroves have found sustenance and livelihood for generations. Artisanal fishing, shellfish harvesting, and sustainable agriculture are just a few of the activities that benefit from the generous resources that the mangrove provides.

However, it is necessary to recognize that the preservation of this fragile ecosystem faces constant threats. Uncontrolled urbanization, pollution, and environmental degradation jeopardize not only the survival of the mangroves but also the entire ecological balance to which they are intrinsically linked.

We must remember that the sustainability of life on the planet depends on the preservation of these precious mangroves. It is our duty to protect them, raise awareness, and take concrete measures to ensure their survival.

Only then can we preserve the natural wealth that surrounds us and build a future where the mangrove continues to sustain life in all its magnificence.



sustenance of lives

In the vast cycle of life that encompasses our planet, the mangrove emerges as a true guardian of sustainability. In the mingling waters, between land and sea, this complex and resilient ecosystem plays a crucial role in sustaining life.

Within the mangroves, life flourishes in a harmonious dance between land and water. Its intricate roots filter and purify the water, providing a vital habitat for a rich diversity of marine and terrestrial species.

It is here that young fish find safe haven and abundant nourishment, while migratory birds rest and feed during their long journeys.

Moreover, mangroves act as a powerful natural barrier against coastal erosion and the force of tides. Their dense interwoven roots stabilize riverbanks and protect coastal communities from devastating storms and floods. Without this protective shield, many inhabited areas would be vulnerable to the whims of the ocean.

The mangrove stands as a testament to the interconnectedness and resilience of nature. Its preservation and conservation are essential not only for the countless species that depend on it but also for the well-being and sustainability of coastal communities and the planet as a whole.

