

The Piracanga Reserve

A project for mangrove conservation and natural camp by Yonic N.G.O.



Yonic N.G.O

Who is Yonic?

- Yonic is the banner organization for several activities. It is an ecosophical project aiming to develop techniques of applied ecology. With its projects, Yonic contributes to the survival of biodiversity in order to maintain a certain quality of life on our planet. « Ecosophy » is our philosophy. Ecology is not only about how we treat our natural environment, but as well about how we treat ourselves, our neighbours, our colleagues, our community, our goods, our built and natural environment. Ecosophy means applying ecology on all levels of life. Practicing Ecosophy means living an ethical attitude, standing up and facing all problems and situations.

Mission

- Yonic is a NGO founded in Geneva. Since 2004, we have been primarily active in the state of Bahia in the north east of Brazil. Our mission is to invent, apply and multiply positive solutions for our environment. Yonic aims to create new production cycles which are based on the transformation of waste into raw material. For three years we have worked in a fisherman's village that was transformed into a tourist destination with the arrival of a new road. Today we plan to use all our know-how for a specific project that aims to offer a balance tourist destination and a unique approach to adventure and discovery in a developing region.

Who are we?

- Yonic represents the effort of a group of individuals who collectively work to invent and develop new technologies for the applied economy of nature. The Yonic team looks at upcoming planetary problems and proposes solutions, which are applicable anywhere on the planet. Founded by three artists, one Swiss and two Brazilian, the NGO is the legal entity that makes all these works happen, in the social field as well as in the artistic and environmental ones. Therefore Yonic isn't a typical NGO, but the representation of a collective effort, where each one has their role to play and contribute to the major objective of rescuing biodiversity - natural and cultural - in order to relieve earth's exhaustion.

For more information about our past and present projects, visit our website www.yonic.org.



Biodiversity from the Piracanga region



The Project

- Project definition
- Geographical and environmental situation
- Socio-economic situation
- Procedure of the project
- Phases
- Financial planning
- The founders of Yonic



Typical landscape on the way to the Reserve



Project definition

- It's a conservation project - to protect a unique and fragile ecosystem located in one of the world's seven « hotspots » (a place of great biodiversity under threat of destruction) what has been established by UNESCO The Atlantic Forest Biosphere Reserve in 1992.
- In 2005, Yonic purchased two pieces of land on the Marau Peninsula with the goal of conservation. The first property (Site of Nova Esperança) is located in a strategic zone, an island surrounded by mangrove and the Atlantic Ocean. It is a sandbar of 4 hectares that is only accessible by foot. The second piece of land (Site of Paz) is higher up the Piracanga river and is accessible by car from the road which end in the mangrove. It is 2 1/2 hectare big and is located 1000 meters away from the first property. You can walk through the mangrove trail or use the river to go from one property to the other.

Definition of conservation:

- Before 1987: to preserve natural areas as “untouched relics of the past”.
- After 1987: to develop as a working model for the future, a future in wich people live in harmony with nature.
- Source:<http://www.conservation.org/discover/pages/history.aspx>
- For the project of the Piracanga Reserve we are planning to make the environmental settings accessible to a new type of tourism and activities for a diversified public. This will ensure a financial contribution to the Yonic team who in return are engaged in the preservation of the environment by adopting a balanced and respectful life style and offering activities completing the work of reforestation. Before explaining these activities and the way they work, it is necessary to understand the geographical, economical and social situation of this environment.



The Piracagna river with mangrove
Beach vue



Vue of the beach property (Site Nova Esperança)
Vue of the property from the beach



What is mangrove?

- It's a vital ecosystem, essential to ensure the health of the world's ecosystems. The term mangrove refers to an assemblage of tropical trees and shrubs that grow in the intertidal zone, frequently inundated with salt water due to tidal activity of the ocean. It also refers to a family of plants. The relationship between the mangrove and their associate marine life cannot be over emphasized.
- The mangrove play a key role in the near shore habitat, they:
 - Act as a filtering system (filter heavy metals, clarify water, stop the pollution of the oceans).
 - Protect costal land (winds, waves and stop erosion).
 - Trap debris and slit (contribute to the soil formation and stabilizes the coastline).
 - Serve as habitat (their intricate root systems provide shelter for many marine and land animals, protecting them from ocean currents and strong winds. Many threatened or endangered species reside therein).
 - Produce nutrients (decomposed leaves fall in the water and contribute to the food chain of aquatic animals).
 - Serve as nurseries and refuges for many juvenile fish and invertebrates (spiny lobsters, gray snappers, jacks and barracudas). It is also a nesting ground for many water birds.

Why is it vital to protect it?

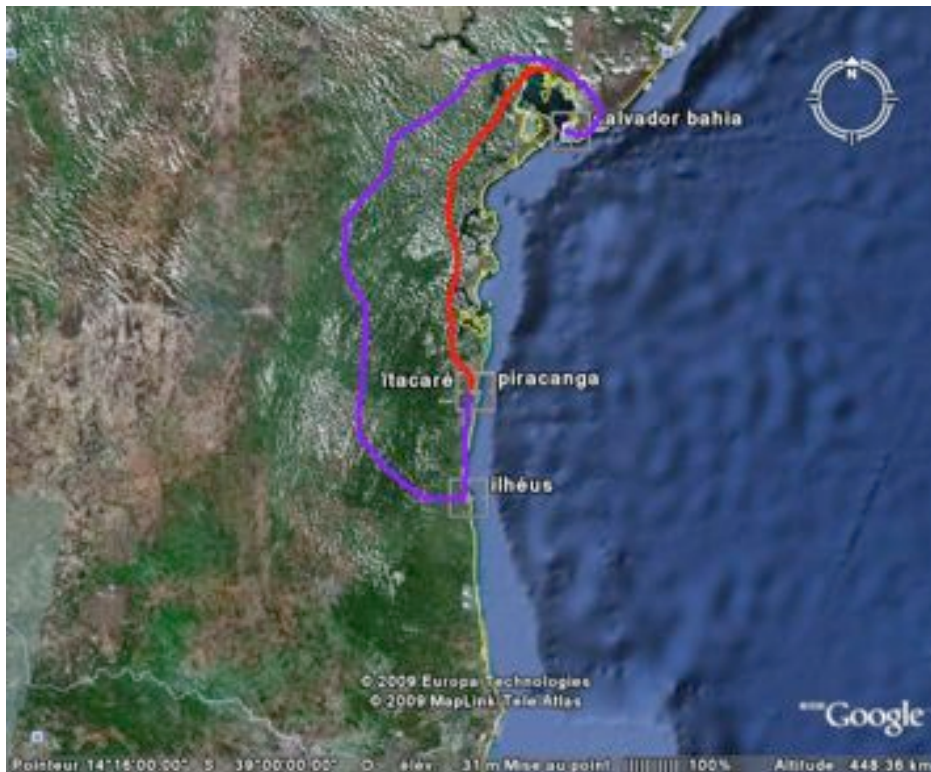
- Mangrove maintenance and restoration are essential to the protection of marine habitat, to the reproduction of a great number of endangered animals, and because of its direct influence on the ocean's health (mangroves work as a natural sewage system, the only one capable of digesting heavy metals). We can't forget it's aesthetical aspect, contributing to the beauty of the coastal zone
- Source: <http://www.mangrovesolutions.com/whyimportant.php>



Piracanga River

Example of mangrove with Bromelia

Geographical and environmental situation



- Piracanga is situated on the peninsula of Marau, 6 Km north of Itacaré. Itacaré is located 65 Km north of Ilhéus, the closest airport. The purple line on the first map shows the old route from Salvador to Itacaré (600km). Since November 2009 a new asphalt road cuts the distance between Salvador and Itacaré by more than half. This new road, the red line on the map, makes the entire region of Atlantic Rain Forest in Itacaré and the peninsula more accessible. The negative impact of a road is felt up to 60 Km on both sides of the road.

- The peninsula of Marau - the third biggest bay of Brazil - is full of natural beauty with its tropical Atlantic Forest, its natural pools, coral, mangrove and is often called the Polynesia of Bahia. Every year, turtles visit the 25km long beach to reproduce. The size of the peninsula is 774,447 square Km with a population of 17,270 (a density of 24,5 people/Km²).
- The main resources for the population are: fishing, wood, piaçava and dendê, pepper, rubber, coconut, guarana and cocoa farming. With the explosion of tourism in this region, the socio-economic reality is bound to change. Therefore, it is of utmost importance to prepare the local population for this change. Since the opening of the new road, 25,000 visitors arrived in Itacaré on the first long week-end. On the normally deserted beaches of the peninsula, thousands of people enjoyed the beautiful environment but nobody was prepared to receive and absorb the pollution (toilets, waste etc.) generated by these visitors.



Vue of the 6 Km separating Itacaré from Piracanga.



New-born turtles on the beaches of the peninsula.

Socio-economic situation

- This new accessibility offers some advantages but also inconveniences which are foreseeable, because they were already seen in Itacaré 10 years ago when a road was built between Itacaré and Ilhéus. When a road is built there are unfortunately never any plans that take into account demographic growth which always accompanies new roads. Historically, in Europe, urban centers were built first, and then roads to connect them. In Brazil the road comes first, making isolated villages accessible to trucks, buses mass tourism and attracting new habitants who think they will find jobs and a good quality of life leaving the country side for the urban center. Before you know it, the fishermans village hosts a *favela* bigger than its historical center.
- The timing of the Piracanga Reserve Project coincides with the opening of the new road inaugurating a whole new area for the entire region, therefore it is of great importance to act now because there are already environmental problems on the peninsula, like an open air wasteland. We will act upstream against inevitable chaotic urbanisation as a result of demographic growth.
- Tourism is the main economic engine in the region. Working with tourism in favour of conservation is an economic future for the region. The objective of our project is to set an example which will serve as a showcase, integrating tourism into the reserve and thereby preserving the ecosystem.
- Brazilian development functions in a sort of mimic, based on the principle of the pioneer: who comes first sets the standards and will be copied by the following ones. Therefore if we start from an ecologically and socially correct concept in this region, our way of acting will be contagious to the region and its inhabitants.

How will Yonic proceed?

- We wish to proceed in several phases in order to create a peaceful environment for wildlife, flora and the human being, and an example for ecosystem management related to tourism, including for waste management.

First phase

- Focusing on mangrove conservation, Yonic wishes to occupy the two pieces of land in a very light and ecological way, building only a simple structure to deliver the necessary support for a visiting camp, for those who wish to enjoy this incredible nature, knowing that their visit won't destroy it. The idea is for the visiting activity to generate an income financing the NGO's work.
- There are two aspects to the first step:
 - 1 : The use of the land for the visitor's camp.
 - 2 : Mangrove conservation.
- Regarding the first activity, after an initial investment, the objective is self-sustainability, generating an income covering the costs of the Yonic team. For the second, it should be a voluntary work, included in the daily life of the Reserve. Visitors, Yonic team members, locals, should all plant one seedling per day provided by our green house which will use organic and sewage waste to fertilize the seedlings.

Target clients

- The public we aim to attract are economically well-off Brazilians and foreign tourists, who appreciate physical activities and a natural life style in an unusual setting. The geographical location of the reserve is strategic; isolated but at the same time easy to reach because of the new road, close to urban centers and other destinations via the airport. A visitor may only come for two days and be exposed to a totally different experience compared to Itacaré and Barra Grande where a certain comfort at Bed & Breakfasts, Resorts and Restaurants is offered. If one is looking for silence, the unusual and the well being that nature can offer, one might as well stay two weeks and exchange comfort for adventure.



Typical shelter which will be replaced by coconut igloo.

Activities

- In order to replace the often misused term ecotourism we call our activities *Virtualecosafari*. The reserve will offer visitors: a hunting ground of natural beauties, capturing the magic without destroying it by walking around and observing the wildlife and flora of the region. For those who wish to stay longer, surfing, canoeing up-river, volleyball, tracking and fishing are offered. The visitor can also contribute actively to the preservation of the mangrove by participating in reforestation. For those who wish to learn more, *Socialecolabor* will be explained in the second stage of our project, but before that we shall explain our needs in order to construct the camp.

What is a light structure

- A drinkable water fountain.
 - A bathroom (shower and toilet), with a proper sewage system.
 - A kitchen.
 - A recycling system for the litter produced on the site.
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- Ecology is always a technical challenge. It is always more interesting to use local resources, in this case the coconut found in abundance in this region. Once moulded, its fiber and husk offer first class material to grow a vegetable garden, cover a path, built an igloo hut or furniture. We also plan to use methane gas as fuel for the motor of the moulding machine for the coconut, produced by the fermentation of human excrements. The toilettes on the upper land will be equipped by a septic tank entirely built with our recycled plastic bricks. On the beach land where it isn't appropriate to dig as there is water all around, the toilettes will be raised in order to collect residues in hermetically closed tins. In both cases methane gas is recuperated to be used as fuel for the motor or fertilizers in the vegetable garden and green house.



Mangrove reforestation
Giant Bromelia



Surfing in front of the Reserve
Turtle going back to the ocean after leaving her eggs



What we have :

- Land to develop the project.
- The material for the structure.
- Knowledge of the place, its difficulties and necessities.
- A young team, motivated and dynamic, that is accustomed to working in challenging conditions and doing heavy work.
- Know-how for reforestation and environmental issues.
- Through an initial donation of € 7,500, we were able to gather all the necessary material on the grounds. We were also able to buy a generator that works with different more ecological fuels. We have also improved our vehicle to withstand the sandy road.

What we need :

- To finance the rest of the budget in order to open the camp for this summer (January 2010). With the opening of the new road, it is urgent to start as soon as possible.
- This financing will essentially fund transport costs, workmanship, communication between the reserve and our base in Ilhéus, organisational structure and administration. We also have to buy material for camp activities.



Edge of the beach land, with the Piracanga river and the Ocean in front.

Second phase

- Once the camp is set up we can initiate the second phase called *Socialecolabor* where eco-social activities are added to tourism activities. In fact we want to occupy the space in an ecological way and encourage local communities to adopt a life style that does not harm the ecosystem. We also have to think about waste management and how we will handle residues, which will be produced by masses of tourists on the beach. This waste is harmful to the environment (reproduction of wildlife like turtles coming every year laying their eggs) and creates an eyesore. A lot of waste has already accumulated in an open air wasteland producing greenhouse gases and polluting the ground water.
- We are specialised in solid waste management and would like to apply our expertise to improve the quality of life for the local people. Therefore we will organize monthly workshops where waste will be collected and processed. Those workshops will be offered to visitors and to the local community leaders and school teachers who wish to contribute actively to the preservation and learn techniques of applied ecology. Two different groups who can work together for a common goal.
- Having two different sites will offer the advantage of locating the waste management and workshop activities (*Socialecolabor*) away from the camp site (*Virtualecosafari*) which will be located on the beach site.



Transformation of plastic waste collected on the beach into construction bricks.
Example of septic tank built with recycled waste bricks.



Third phase

- The third phase consists of diligently preserving the reproductive environment of marine turtles, meaning the beaches throughout the peninsula (25 km). This operation will last seven months of the year and must be well organized, in coordination with Tamar, the official organization for turtles, and a certified marine biologist. This activity is not for profit and requires separate funding.
- In order to develop a veritable cultural exchange, we would like to also begin an artist in residence program at the Piracanga Reserve. Each year during the low season an artist will be invited to undertake a project with the goal of producing works made from recycled materials. Their stay will last 30 days. The cost of their stay and production should be covered by an institution such as Pro Helvetia or an institution of the artist's choice, or by the artist himself or herself.

Budget estimate for the implantation of the first phase.

(6 month projection) In Reais

- 2 minimum salaries for the couple maintaining the site 6,000 R\$ 1,000 x 6 (month)
- Service provision for a team of 3 to put up the structure 9,000 R\$ 3,000 x 3 p.
- Project manager 1,800 x 6 month 10,800
- Accountant, building and working permits etc. 6,000
- Material and tools for building 12,000
- Pick up truck and gasoline for material transportation 5,000
- Road maintenance 3,600
- Building of water font 2,000
- Energy generator 2,500
- Acquisition of leisure material (canoe, surf boards, fishing nets) 6,000
- Camping kit 1,300
- Communication 1,200
- International Marketing 5,000
- **Total 70,400**
- **Total + 25 % (10% unforeseen + 15% administration) 88,000**
- **Total € =(R\$ 1 = €0.40)= 35,200**

Financial Planning: estimated revenue for one year

First Phase: High season

- Price per night per person R\$ 100 (€40). With a capacity of 10 persons, two months of the high season (January – February), 60 days x 10 persons x R\$ 100 = R\$ 60,000 (€24,000). High season prices also apply to the months of July, August and September as well as certain weekends. Estimate: 90 days x 10 persons X R\$ 100 = R\$ 90,000 (€36,000).

- Maximum estimate for the 1st year: 100% occupancy January – February and 80% for July – September.

$$60,000 + 72,000 = \mathbf{R\$ 132,000 (\text{€ } 52,800)}$$

- Minimum estimate for the 1st year: 60% occupancy January – February and 50% for July – September.

$$36,000 + 45,000 = \mathbf{R\$ 81,000 (\text{€ } 32,400)}$$

First Phase: Low season

- Price per night per person R\$ 60 (€ 24). With a capacity of 10 persons, seven months, 210 days x 10 persons x R\$ 60 = R\$ 126,000 (€50,400)
- Maximum estimate of the first year: 80% occupancy = **R\$ 100,800 (€ 40,320)**
- Minimum estimate for the 1st year: 30% occupancy = **R\$ 37,800 (€15,120)**
- The cost of food is calculated separately, as this will be subcontracted to a couple that are responsible for the site.

Summary of the First Phase

Maximum estimate: R\$ 132.000 + 100.800 = **R\$ 232.800 (€93.120)**

Minimum estimate: R\$ 81.000 + 37.800 = **R\$ 118.800 (€ 47.520)**

Second phase

- Price per person for a one week workshop (5 days) = R\$ 100 (€ 40). Capacity of workshop: 10 persons with an estimate of one workshop per month, 12 workshops / year x 10 persons x R\$ 100 = R\$ 12,000 (€ 4,800).
- For guests, this cost will be added to the cost of their stay. A minimum charge will apply to members of neighboring communities who are required to stay on-site to complete the workshop.

Third phase

- The Reserve will consider funds from the stay as the cost of a workshop and the production of pieces, one artist/year, 30 days x R\$ 60 = R\$ 1,800 (€ 720) + 1 month of individual workshop R\$ 1,000 (€ 400). Total R\$ 2,800 (€ 1,120)

Revenue estimate for the second and third phases: R\$ 12,000 + 2,800 = **R\$ 14,800 (€ 5,920)**

Total estimate

- **Maximum:** R\$ 232,800 + 14,800 = **R\$ 247,600 (€ 99,040)**
- **Minimum:** R\$ 118,800 + 14,800 = **R\$ 133,600 (€ 53,440)**

- With annual revenue of between € 50,000 and 100,000, we estimate that as from the third year, the Reserve will be able to pay the NGO, which requires € 70,000 per year to operate. Costs have not yet been deducted from these revenues. Costs include primarily labor and transport.
- In order to ensure the successful implementation of the project and its longevity, it is necessary to ensure the functioning of the NGO for the next two years. Yonic therefore requires an investment of € 167,700 (2 years of NGO + the budget for the first phase).
- Geraldine Belmont is currently in Europe in order to identify financial partners for this project and for the overall financing of the NGO, so as to ensure effective operation for the next two years. To contact her, please send an email to geraldine@yonic.org.



Turtle made with recycled plastic

Who are the founders of Yonic?

- **Yonic** is the result of a meeting between a Brazilian family and a Swiss artist. For more than thirty years, this family has lived and worked with the goal of improving the relationship between human development activities and preservation of the environment. The NGO was created in order to provide an international scope for this groundbreaking work.
- **Paulo de Tarso**: educated as an artist, Paulo has also worked as a journalist, biologist and architect. He is the inventor of the recycling techniques that Yonic applies and develops.
- **Fernanda Ward**: artist, dancer and actress, Fernanda left her life in Rio to actively participate in the creation of a more socially minded Brazil. For 25 years, with her husband Paulo, she has built a space and a team that undertakes the projects and products of Yonic.
- **Geraldine Belmont**: educated in fine arts in Lausanne, Geraldine left Switzerland for Brazil in 2004 where she joined Paulo and Fernanda to create the NGO. She represents Yonic outside of Brazil with presentations and expositions in Europe, is in charge of media relations and fundraising.
- The three founders create and implement all of Yonic's projects together.