

## **Executive Summary**

### **WATER SUPPLY, NURSERY, AND COMMUNITY PRODUCTIVE GARDEN:**

Sítio Fundão, Caruaru – Pernambuco - Brazil

#### **Summary**

This is a proposal of an integrated project to be developed by the Institute Terra Viva in partnership with the organization Espaço Feminista and the Association Mãos que Acolhem from Sítio Fundão. The idea arose from the expressed needs of the community's residents and consists on a study, development, and implementation of a system for collecting, treating, and distributing potable water for domestic use and growing plants and vegetables in a collective nursery.

#### **Objectives**

The main objectives for the proposed project are as follows:

1. Develop the infrastructure for rainwater collecting, treatment, and distribution based on a specific technical study, considering social values and collective decision-making;
2. Work with the community to develop a nursery and seedbed for edible plants, endangered native species, and drought-resistant plants to contribute for the region's water security;
3. Establish a continuous social process of care, committed to maintaining the equipment and supporting plant development;
4. Support initiatives aiming to the improvement of family's income.

#### **Community Involved and Partner Organizations**

##### **1. Community Involved:**

Residents of Sítio Fundão, Caruaru - PE.

##### **2. Partner Organizations:**

Associação Mãos que Acolhem, Sítio Fundão, Caruaru - PE.

Espaço Feminista do Nordeste para a Democracia e Direitos Humanos - CNPJ: 10.828.018/0001-09.

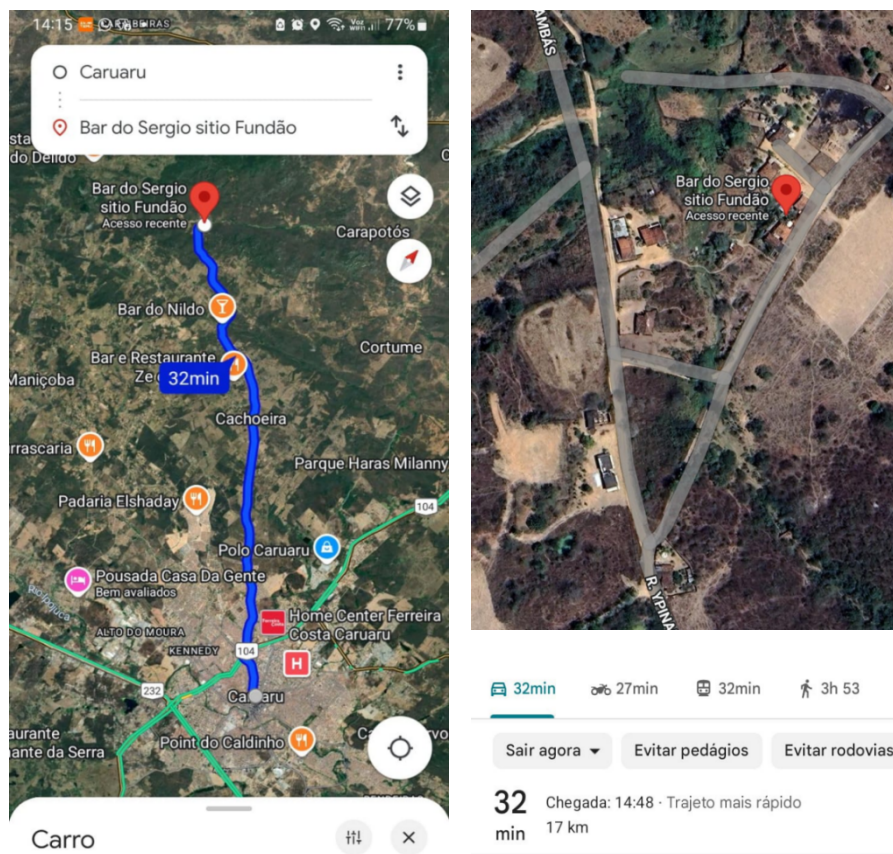
#### **Justification**

The municipality of Caruaru - Pernambuco, is located in a transitional area between the Atlantic Forest and the Semi-Arid biome in the Northeast region of Brazil. The community of Fundão is located 17km (10.6 miles) from downtown Caruaru, but despite this relatively short distance, it remains isolated due to the lack of passable roads and regular public transportation. *"If someone gets sick and needs to go to a health clinic, if it's not on the day that alternative transport comes through, they have to walk four kilometers (2.5 miles) on foot to reach a point where regular*

*transportation is available", says Marcelo Severino da Silva, president of the recently established Associação Mãos que Acolhem, created with the support of Espaço Feminista<sup>1</sup>.*

However, this is not the most serious problem faced by the community. According to Maria José dos Santos, a 66-year-old woman born and raised in Sítio Fundão, the biggest issue is the lack of (potable) water. *"We don't even have drinkable water here. There are no reservoirs, and the ones that exist are dirty. If you dig a well, the water comes out brackish. So we have to buy water from water trucks, paying with money we don't have", she explains.* Maria José sums up the situation faced by the entire community with no access to water for planting, food production, and limited transportation options, has very few alternatives and lives in conditions of extreme poverty and vulnerability. The financial aid received through the Bolsa Família governmental program often turns out to be used to buy a 16,000-liter water truck.

### Location of Sítio Fundão, Caruaru - PE



### Activities and Budget Estimate

<sup>1</sup> Espaço Feminista ([www.espacofeminista.org](http://www.espacofeminista.org))

The following table summarizes the cost estimative for water wells, which are the most significant expense. Regarding the desalination units, we present the average cost for equipment with a capacity of 500 liters per hour in case the water quality is brackish, as is common in the region. If the water quality is adequate, the budget will omit this cost. A laundry facility will accommodate the desalination unit, which Espaço Feminista will fund the construction. Operators for this initiative will be compensated according to their roles and based on the decisions made by the Institute's Board of Directors, as outlined in the Investment Proposal.

### Estimated Comparative Cost of Wells for Sítio Fundão, Caruaru

Location/Activity	Acquisition (product or service)	Daily Water Flow	Domestic Consumption per Person per Day	Daily Flow minus Domestic Consumption	Irrigation Area	Investment plus Operation & Yearly Maintenance	Annual Operating and Maintenance Cost	Cost per Person
Sítio Fundão, Caruaru - PE	BRL	Liters/day	Liters	Liters/day	M²/day	BRL	BRL/Year	BRL
Artesian Well: 100m Total Cost	71,250.00	120,000	100	95,000	19,000	86,000.00	14,750.00	344.00
Artesian Well 50m Total Cost	36,750.00	48,000	100	23,000	4,600	44,150.00	7,400.00	176.60
Shallow Well (Cacimba): 20m Total Cost	27,250.00	30,000	100	7,500	1,500	31,550.00	4,300.00	141.56
Artesian Well (Amazonas) 30m Total Cost	25,250.00	42,000	100	17,000	3,400	29,850.00	4,600.00	119.40

## Investment Proposal

### Investments – Sítio Fundão (with desalinator)

Item	Amount (BRL)	Amount (USD)
<b>Initial Investment (1st year with Operation &amp; Maintenance)</b>	<b>BRL 101,935.50</b>	<b>US\$18.137,99</b>
Administrative Costs (Personnel and Services)	BRL 7,630.50	US\$1.357,74
Project Coordination	BRL 18,000.00	US\$3.202,85
<b>Acquisitions, Operation &amp; Maintenance</b>	<b>BRL 76,305.00</b>	<b>US\$13.577,40</b>
Artesian Well (Amazonas – 30m)	BRL 29,850.00	US\$5.311,39
Desalinator (500 l/h)	BRL 29,400.00	US\$5.202,85
Plant Nursery (2,500 m²)	BRL 17,215.00	US\$3.063,17
<b>Annual Operation &amp; Maintenance Costs (2nd year)</b>	<b>BRL 30,755.25</b>	<b>US\$5.472,46</b>
Administrative Costs (Personnel and Services)	BRL 3,815.25	US\$678,87

Project Coordination	BRL 12,000.00	US\$2.135,23
Annual Operation & Maintenance Costs	BRL 14,940.00	US\$2.658,36
<b>Annual Maintenance Costs (2nd to 5th year)</b>	<b>BRL 123,021.00</b>	<b>US\$21.889,86</b>
<b>Total Investment (1st to 5th year)*</b>	<b>BRL 224,956.50</b>	<b>US\$40.027,85</b>

\* Note: BRL/US\$ (29/04/25) = 5,62

#### Investments – Sítio Fundão (without desalinator)

Item	Amount (R\$)	Amount (USD)
<b>Initial Investment (1st year with Operation &amp; Maintenance)</b>	<b>BRL 68,318.25</b>	<b>US\$12.156,27</b>
Administrative Costs (Personnel and Services)	BRL 3,253.25	US\$578,87
Project Coordination	BRL 18,000.00	US\$3.202,85
<b>Acquisitions, Operation &amp; Maintenance</b>	<b>BRL 47,065.00</b>	<b>US\$8.374,56</b>
Artesian Well (Amazonas – 30m)	BRL 29,850.00	US\$5.311,39
Plant Nursery (2,500 m <sup>2</sup> )	BRL 17,215.00	US\$3.063,17
<b>Annual Operation &amp; Maintenance Costs (2nd year)</b>	<b>BRL 19,326.65</b>	<b>US\$3.438,90</b>
Administrative Costs (Personnel and Services)	BRL 1,626.63	US\$289,44
Project Coordination	BRL 12,000.00	US\$2.135,23
Annual Operation & Maintenance Costs	BRL 5,700.00	US\$1.014,23
<b>Annual Maintenance Costs (2nd to 5th year)</b>	<b>BRL 77,306.50</b>	<b>US\$13.755,60</b>
<b>Total Investment (1st to 5th year)*</b>	<b>BRL 145,624.75</b>	<b>US\$25.911,88</b>

\* Note: BRL/US\$ (29/04/25) = 5,62