# Brazil



**Organization:** Centro de Desenvolvimento Agroecológico Sabiá
**Location:** Semi-arid region of Pernambuco, Brazil
**Solution:** Combines capacity building with integrated greywater reuse system and agroforestry technology to combat drought and food insecurity
**Factsheet Period**: First round of UNDP AFCIA funding (16 months); Second round of UNDP AFCIA funding (12 months)



**Collection box for a greywater reuse system built by the community members - @Centro Sabiá**

Water scarcity impacts one in ten families in Brazil, and 42% of those also face food shortages. Facing severe droughts and food insecurity, farmer families in the semi-arid Northeast are among the country's most vulnerable to climate change. The solution addresses these challenges by combining greywater reuse with agroforestry systems. This method increases water availability, enabling irrigation and improving soil health and food security through sustainable farming practices. Centro Sabiá implements solutions rooted in agroeconomy and social technology, ensuring community-led and scalable impact.

## Key achievements

- 37,336 people (55% women) benefitted from better water management and adapted agri-food systems
- 130 families implemented greywater reuse systems, with access to technical support, 30 new families introduced greywater reuse with an average of 50,000 litres/year greywater reused per family
- 30 community-based agroforestry systems developed
- 195,834 people (67% women) sensitized by the content produced and promoted by Centro Sabiá
- 56 women gained knowledge about their rights and how they are affected by climate change
- 77 women implemented adaptation strategies and cultivated 37 different species on average in home gardens
- 48 microloans disbursed to households (55% women-led) to strengthen their adaptation and regenerative agriculture systems
- 358 farmers (63% women) with improved financial literacy and climate adaptation knowledge





## Adaptation benefits

- Increased water availability for domestic use and irrigation in dry seasons
- Enhanced food security through irrigated agroforestry plots
- Prevention of pollution with greywater treatment
- Promotion of sustainable agriculture resilience
- Improved soil health
- Preservation and restoration of the unique Caatinga biome in the northeastern Brazil
- Collaboration with public and civil sector partners on water reuse

## Innovation

- Enhances rainwater harvesting for efficient irrigation
- Uses simple, affordable technology built by local people
- Explored semiarid regions as potential carbon sinks

## Social impact

- Improves water management and agri-food systems
- Promotes resilience, food security and income generation
- Encourages knowledge sharing and community collaboration
- Contributes to policy discussions on water reuse, climate adaptation and ecological sanitation
- Empowers of women, youth and traditional rural communities







## Replication potential

- Adaptable across the Brazilian semi-arid region, Latin America and Africa due to similar socio-ecological conditions
- Simple training allows local farmers to build and maintain the systems
- Integratable into federal water management policies
- Scientific papers (2) and policy briefs (16) published and shared with public managers

## Funding snapshot

- UNDP-AFCIA grant: US$235,000 (initial grant: 125,000; scaling grant: $110,000)
- Caritas International: $185,000 to scale up the activities
- Ministry of Environment in Brazil: $20,000 to implement training in climate change adaptation and mitigation in semi-arid regions

| Investability | |
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| Revenue per year | Each family saves over $350 annually on water and earns at least $300 monthly from market sales |
| Sustaining criteria | Low-cost, local materials reduce financial burden and boost local economies<br><br>Potential federal investment through the Rural Sanitation National Policy<br><br>Families build and maintain RAC&SAF systems, ensuring ownership and longevity<br><br>Educational workshops facilitate the operation and maintenance of systems<br><br>Non-patented technology supports local adaptation, knowledge sharing, and long-term viability<br><br>Each funded project receives personalized technical support, helping families make informed, low-risk investments that ensure long-term viability and resilience |
| Financial innovation | Large-scale adoption reduces material costs via economies of scale<br><br>Exploring carbon credit opportunities from agroforestry systems could generate additional income |

To read their story, visit UNDP-AFCIA

To watch their video, click here

To contact the organization, visit Centro Sabiá