



KATOOMBA IV

**Capturing the value of
ecosystem services**

*“Investing for profit in
Latin American Biodiversity”*

Environment Funds (in Millions)

- ❑ Biodiversity (Terra Capital): US\$ 15
- ❑ Sustainable Forestry: US\$ 115
- ❑ Amazon Permanent Fund: US\$ 150
- ❑ Clean Technologies: US\$ 35-75
- ❑ Carbon: US\$ 3-5



TERRA CAPITAL



BIOAMAZÔNIA

Organização Social



CleanTech

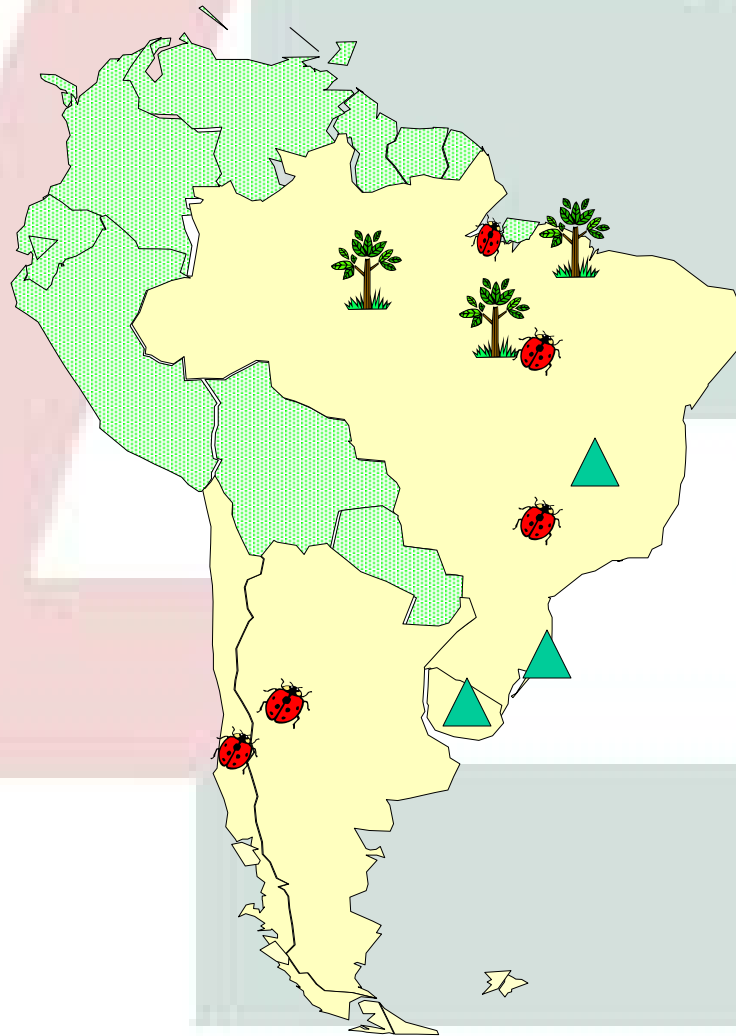


Biodiversity Sectors

- Organic agriculture
- Native species aquaculture
- Reforestation and aforestation
- Old growth forest management
- Non timber forest products
- Nature tourism

Projects Location

-  : Old Growth
-  : Planted
-  : Biodiversity





Instituto Brasileiro de Educação em Negócios Sustentáveis

- Training managers in “green” business
- “Greening” academic programs
- Field schools: forestry and organic
- Reducing the “digital divide”
- Green management trainee program
- Leadership identification

www.ibens.org



Muaná Alimentos, Marajó, Pará (Assai heart of palm and pulp)



Investment: US\$1.5 MM

IRR_(e): 26.6%



NTFP Amazonian Heart of Palm - Marajó



1999 – 5th company in the sector

Sept 2000 – FSC Certification

2001 – 1st company in the sector (5% of market)



Muanã Amazon community Development Program

- ❑ Social impact: 7 municipalities= 52'000 people
 - ❑ Direct 3d party suppliers:
 - Lisboa 11 families
 - Recreio 13 families
 - Bom Jesus 12 families
 - São Sebastião 11 families
 - Mariai 9 families
 - ❑ IBENS/CDI-Citizenship school (300 students/year)
- Sustainable
(FSC?)
Harvesting of
Assai Fruit &
Hearts of Palm

FSO-FAZENDA SANTO ONOFRE Ltda **(organic vegetables, salads, spices)**



Investment: US\$ 800,000

IRR (e): 24.8%





FSO Ltda, Morungaba São Paulo, Brazil



- AAO Organic Certified
- Yearly sales: + 170% (in one year)
- 16 new 3rd party suppliers
- IBENS Technical School
- IBENS/ CDI – Computer and Citizenship School
- Future: Franchising ?



FSO Ltda: Community Impacts

- ✓ From 80 to 150 new permanent jobs
- ✓ 16 new 3d party suppliers of organic produce
- ✓ New permanent in house training structure:
 - 5 technicians
 - 1 agronomic engineer
- ✓ + 54 Organic agriculture technicians (2001)
- ✓ IBENS/CDI-citizenship school (120/year)





1st FSC Certified Tropical Plywood Producer



Certified area: 37,410 ha

Total Forest Reserve: 220,000 ha





Tropical humid old growth sustainable forestry



- ✓ US\$ 15-35 MM Investment
- ✓ Horizon 25-50 years
- ✓ Plywood: 30'000 m³/year
- ✓ Sawnwood: 60'000 m³/year
- ✓ 800-1000 employees
- ✓ Forest reserve: 300'000 Ha
- ✓ Estimated ROE 14-20% (+ 50% with IPO)





Community impact

- ❑ 3rd party log suppliers (40% of total):
 - Precious Woods Amazonas 12,000 m³/year
 - Valdenor 10,000 m³/year
 - Rose 10,000 m³/year
 - Togo 5,000 m³/year
 - Toinho 5,000 m³/year
- ❑ IBENS/CDI-Citizenship school (300/year)



Amazon babassu-nut traditional kernel oil extraction



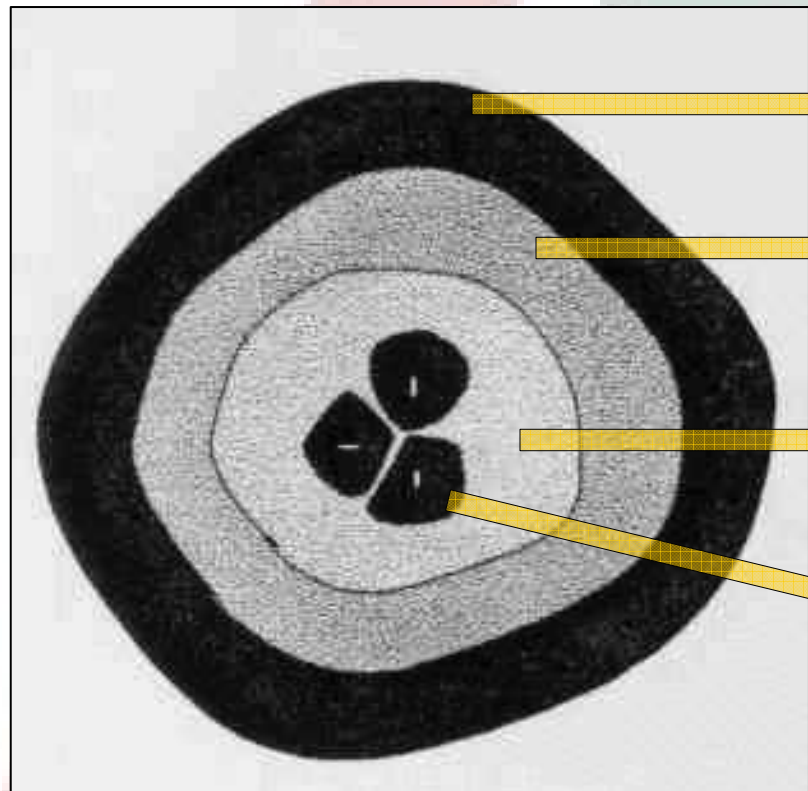
Quebradeiras Average Yield: 6%

TOBASA, Tocantins

Babassu Integral Utilization

Investment: US\$1.8 MM

IRR_(e): 29.7%



Epicarp (12%): Energy

Mesocarp (22%):
Starch and Alcohol

Endocarp (50%):
Activated Charcoal

Kernel (6%): Oil and Amid

Total Yield: 90%

Forestry based green business “in the works”

- ✓ Forestry based improvement of Certified RIL
- ✓ Forestry based ecotourism (1-5 day expeditions)
- ✓ Forestry based NTFP extractivist harvesting
- ✓ Forestry based biomass thermal energy
- ✓ Forestry based park management silviculture
- ✓ Forestry based Carbon and watershed
- ✓ Forestry based bio-prospecting



“Green Biz” business obstacles

- ✓ **NBR 1: management, management, management,...**
- ✓ Lack of working capital and mezzanine financing
- ✓ Survival through gov't subsidies, tax evasion
- ✓ Requires enormous patience and hand-holding
- ✓ Needs Business Plan guidance and funding
- ✓ Investment needs (unwelcome) monitoring
- ✓ Lack of field/technicians, lawyers, certifiers
- ✓ No market liquidity => difficult exits



“Green Biz” Business Rewards

- ✓ Competitive financial returns
- ✓ Promoting SMEs, diversifying risk
- ✓ Important poverty alleviation and social benefits
- ✓ Tangible positive Environmental Impacts
- ✓ Strong demonstration effects (benchmarking)
- ✓ Facilitator of Private/Public Sector Partnerships
- ✓ Personally rewarding for the Management team





A**R**

São Paulo, Brazil

www.a2r.com.br