Sustainable Palm Oil Developments in Brazil
AGROPALMA Group - Marcello Brito
### Biome Characteristics

<table>
<thead>
<tr>
<th>Biome Characteristics</th>
<th>Area (km²)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest</td>
<td>2,913,792.77</td>
<td>67.69</td>
</tr>
<tr>
<td>Non-forest</td>
<td>693,830.75</td>
<td>16.10</td>
</tr>
<tr>
<td>Deforested area</td>
<td>400,431.41</td>
<td>9.30</td>
</tr>
<tr>
<td>Secondary vegetation</td>
<td>127,191.91</td>
<td>2.95</td>
</tr>
<tr>
<td>Water</td>
<td>170,010.65</td>
<td>3.95</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,305,257.49</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Clotilde P. Ferri dos Santos; Giane de Fátima Valles; Marcelo Francisco; Sestini; Paulina Hoffman; Sergio Lopes Dousseau; Alexandre Junqueira Homem de Mello. *Anais XIII Simpósio Brasileiro de Sensoriamento Remoto, Florianópolis, Brasil, 21-26 abril 2007, INPE, p. 6941-6948*
Legal Amazon region is different from the Biome Amazon

<table>
<thead>
<tr>
<th>Legal Amazon Region</th>
<th>Biome Amazon Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal / Politic Concept</td>
<td>Environmental Concept</td>
</tr>
<tr>
<td>510 million ha</td>
<td>419 million ha</td>
</tr>
<tr>
<td>61% of the Brazilian territory</td>
<td>49% of the Brazilian territory</td>
</tr>
<tr>
<td>30% occupied by farms (151.4 million ha – around 488,000 farms)</td>
<td></td>
</tr>
<tr>
<td>9 states</td>
<td></td>
</tr>
<tr>
<td>23 million inhabitants</td>
<td></td>
</tr>
<tr>
<td>7% of the Brazilian GDP</td>
<td></td>
</tr>
<tr>
<td>Created in 1953 for taxes policies reasons</td>
<td>Formulated according environmental criteria’s (fauna and flora)</td>
</tr>
</tbody>
</table>

Source: INPE, MMA, CONAB, IBGE, WWF.
Facts About the Amazon Region

- 23 million inhabitants, 10 million living under poverty and 3.8 million under extremely poverty (less then US$ 1.00/day).
- In the Amazon region cities, only 48% of the domiciles have access to domestic waste treatment and less then 68% to treated water. Close to 11.5% of the population over the age of 15 is unlettered.
- The region has the highest death rate in new born infants in Brazil, 48 out of 100,000.
- The region has the lowest HDI in Brazil, only 0.72.
- Over 70 million ha of forest was already cleared without bringing social and economical development to its population.
- 60% of the electric power still come from petro diesel.

Source: IBGE, MME, MS
Over 60 million hectares suitable for Oil Palm Plantations
Principle 2: Compliance with applicable laws and regulations
Criterion 7.2 Soil surveys and topographic information are used for site planning in the establishment of new plantings, and the results.....
Principle 5: Environmental responsibility and conservation of natural resources and biodiversity

Criterion 7.3 New plantings since November 2005, have not replaced primary forest or any area required to maintain or enhance one or more High Conservation Values.
EU-25: ~ 5.7 million ha of Rapeseed plantations
SE Asia – Oil Palm Plantations

~11 million ha of oil palm plantations

Source: http://earthtrends.wri.org
Legal Amazon Map

- Deforested areas
- Under pressure areas
- Forest areas
- Non-Forest Areas

Source: O AVANÇO DA FRONTEIRA NA AMAZÔNIA: DO BOOM AO COLAPSO - Danielle Celentano & Adalberto Veríssimo, Oil World, LMC, Agropalma, ABIOVE
So you take all our gold, timber and natural resources and what do we get?

You get 2000 environmental NGOs within 450 years!

When it started? ~ 1526!
The Agropalma Group in Brazil

✓ 106,327 ha of total area.
✓ Over 62,000 ha of protected forest reserves
✓ 39,580 ha of oil palm plantations (32,836 under production)
✓ **Ratio of 1 ha of palms : 1.57 ha of forests (set aside conservation areas)**
✓ 8,580 ha of oil palm plantation in partnership with outgrowers and family farmers/small holders (up to 10 ha/each)
✓ 5 mills, 1 refinery, 1 margarine/shortenings and 1 biodiesel plant (processing only PFAD as feedstock)
✓ 5,000 direct jobs.
Our Road to Sustainability

- Biodiversity (identification / Monitoring / Management)
- People: Improve of living standards
Herptofauna study (sampling areas), all in mainland forests.

<table>
<thead>
<tr>
<th>Area (spot)</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPA-Oeste</td>
<td>2°24'12,5&quot;S</td>
<td>48°49'25,7&quot;W</td>
</tr>
<tr>
<td>Agropar</td>
<td>2°33'32,1&quot;S</td>
<td>48°53'55,7&quot;W</td>
</tr>
<tr>
<td>Agropalma (ou Areial)</td>
<td>2°36'14,3&quot;S</td>
<td>48°47'16,5&quot;W</td>
</tr>
</tbody>
</table>

Source: CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma
Identified Reptiles and Amphibians species: 62
FAUNAL MONITORING AT AGROPALMA FORESTS – MAMMALS

Area (Spot) | LATITUDE      | LONGITUDE      
---          |---------------|---------------
1 CPA-Leste  | 02º15’43,5”S  | 48º40’47,8”W  
2 CPA-Oeste  | 02º24’10,2”S  | 48º49’36,0”W  
3 Agropar    | 02º33’36,5”S  | 48º53’55,4”W  
4 Galiléia   | 02º29’36,2”S  | 48º42’46,8”W  
5 Paraíso    | 02º30’45,2”S  | 48º37’04,2”W  
6 Amapalma   | 02º40’20,9”S  | 48º57’19,9”W  
7 Agropalma  | 02º36’18,2”S  | 48º47’06,2”W  
8 Fazenda Nova| 02º37’03,4”S  | 48º40’55,0”W  
9 Castanheira| 02º36’49,2”S  | 48º31’43,1”W  

Source: CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma
<table>
<thead>
<tr>
<th>Identified mammal species</th>
<th>2004</th>
<th>2006</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threatened mammal species</td>
<td>27</td>
<td>28</td>
<td>37</td>
</tr>
</tbody>
</table>

| Identified mammal species | 5    | 5    | 6    |

Sources: 2004/06 Prof. Dr. Luis Silveira/USP-Diversity of Birds and monitoring of Cynegetic Species in the Forests of Agropalma Group. 2008 CI - Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma.
FAUNAL MONITORING AT AGROPALMA FORESTS – 2008
BIRDS

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<tr>
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<tr>
<td>2 CPA-Oeste</td>
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<td>02°29’36,2” S</td>
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<tr>
<td>5 Paraiso</td>
<td>02°30’45,2” S</td>
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<tr>
<td>6 Amapalma</td>
<td>02°40’20,9” S</td>
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</tr>
<tr>
<td>7 Agropalma</td>
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Source: CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma
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<th>2008</th>
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<tbody>
<tr>
<td></td>
<td>338</td>
<td>347</td>
<td>369</td>
</tr>
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<tbody>
<tr>
<td></td>
<td>6</td>
<td>7</td>
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*Source: Agropalma, Prof. Dr. Luis Silveira/USP-Diversity of Birds and monitoring of Cynegetic Species in the Forests of Agropalma Group./ Biologist Fernando Pacheco / CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma*
Spots for study and sampling for APP – Areas under Permanent Protection under the Brazilian Environmental Code, in Agropalma plantations and forests reserves.

Source: CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma
**Study on APP - Areas under Permanent Protection**

**How it is**

*Spot # 23.* APP along the State Road PA 150, showing the degradation of the riparian forest.

**How it should be**

*Spot # 4.* APP very well maintained.

*Source: CI – Conservation International (Brazil): Diagnóstico da Biodiversidade, Proposta de Criação de uma RPPN e de um Programa de Gestão Ambiental para a Área da Agropalma*
What about our people?

Lodging  Fitness center  Housing

Cafeterias  Clubs  Leisure
Education and Health are Priorities

In Company Benefits

- 437 students from workers children's and local communities attending junior and high school
- 59 workers attending college
- 37 workers attending MBA
- 29,633 medical attendances performing more than 19,881 laboratorial tests in 2008, benefiting our workers, their families and the local communities
- ~ 4,200 meals served per day to the workers in our cafeteria throughout 2008.
Safety and Health first!

Gloves

Safety boots

Biodiesel B3
July/09: B4
Jan/10: B5

Goggles
Making a Difference
Brazil: DENDÊ OIL FAMILY AGRICULTURE PROJECT
A QUEST FOR SUSTAINABLE ECONOMIC AND SOCIAL DEVELOPMENT
ReVista - Harvard Review of Latin America (Fall 2006)

186 families
Average net income/family before the project: GBP 18.30/month*
Average net income/family in 2008: GBP 515.00/month*
Brazilian official minimum wage: GBP 142.00/month*

Source: Agropalma. * Exchange rate GBP 1.0: R$ 3.28
Agropalma Sustainable Agriculture Paradigm

- High technology agriculture with biologic pest management, avoiding chemicals use, soil erosion and lixiviation
- Strong GHG emission reduction and biodiversity preservation and conservation plans
- Tight social-economic partnership with local communities and NGOs
- Guaranteed by International approved sustainable certifications
Agropalma Certifications

- 1993: Organic (IFOAM, USDA Organic, JAS and BioSuiss)
- 1997: Kosher
- 2001: ISO 9.001
- 2002: ISO 14.001
- 2002: OHSAS 18.001
- 2008: EcoSocial by IBD
- ISO 22.000 – confirmed final audit for June/09 (only for refinery, shortening and margarine plant)
- RSPO – expected final audit for July 2009

The only worldwide Palm Oil producer with these certifications for the entire operation, from nursery all the way through refinery and biodiesel plant.
Final Conclusion

• Economic development alone can no longer be used as a license to ignore environmental devastation and social injustice. Business ventures that erode social and environmental capital will risk their license to operate while they undermine their own future, as no company is sustainable in failing societies.

“Royal Tropical Institute – Maria Jose Gonzales in The challenges and opportunities of the business sector in the fight against poverty”.
We must remember there is always someone watching us....
Thank you

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