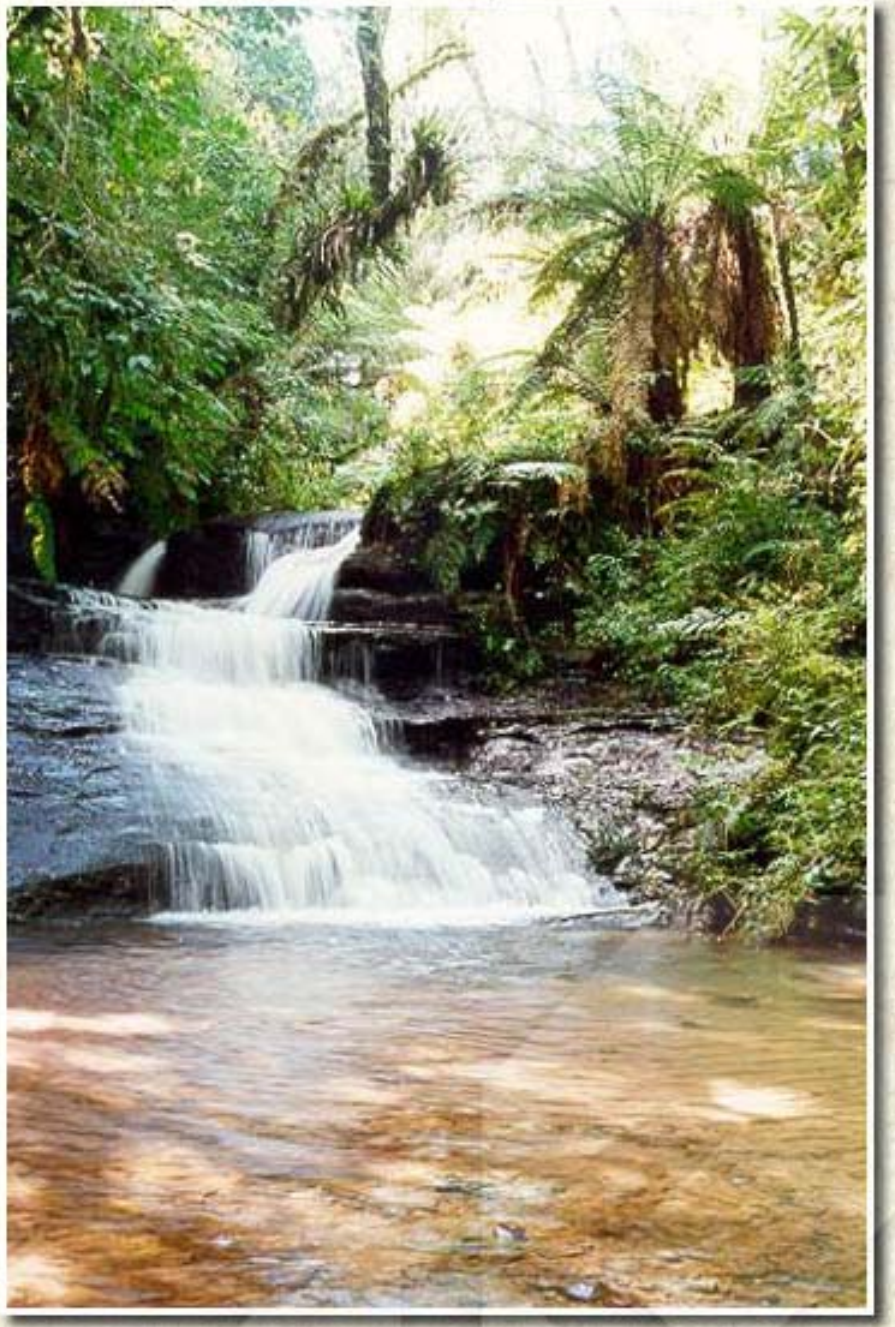
Plantations Meeting



Bonn, Sept. 09, 2004

Why is it necessary to certificate Forest Plantations?

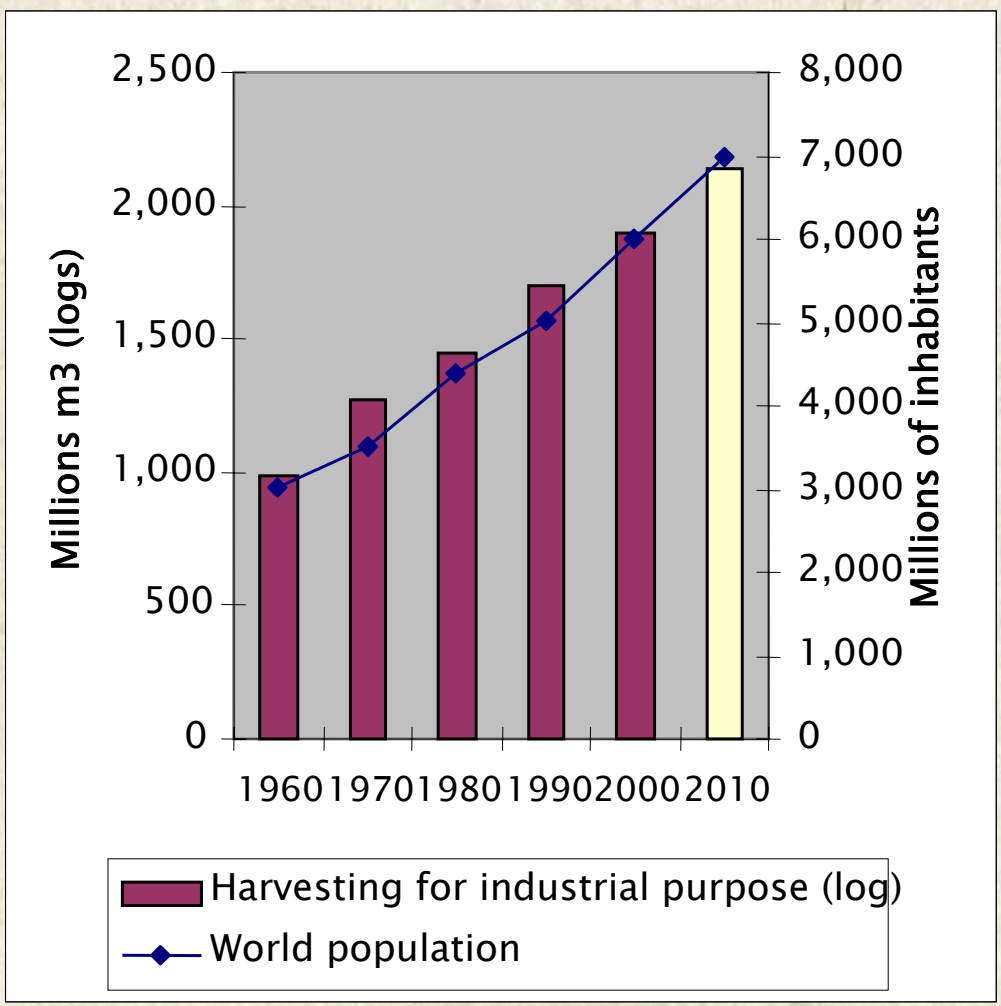
1. Because it's demanded by society.

"The growing conscience of consumers concerning to forest degradation and destruction has taken them to demand that their wood supplies don't stimulate forest devastation, but help and guarantee the forest resources for the future"

Fonte: www.fsc.org.br

World Wood Market (Logs)

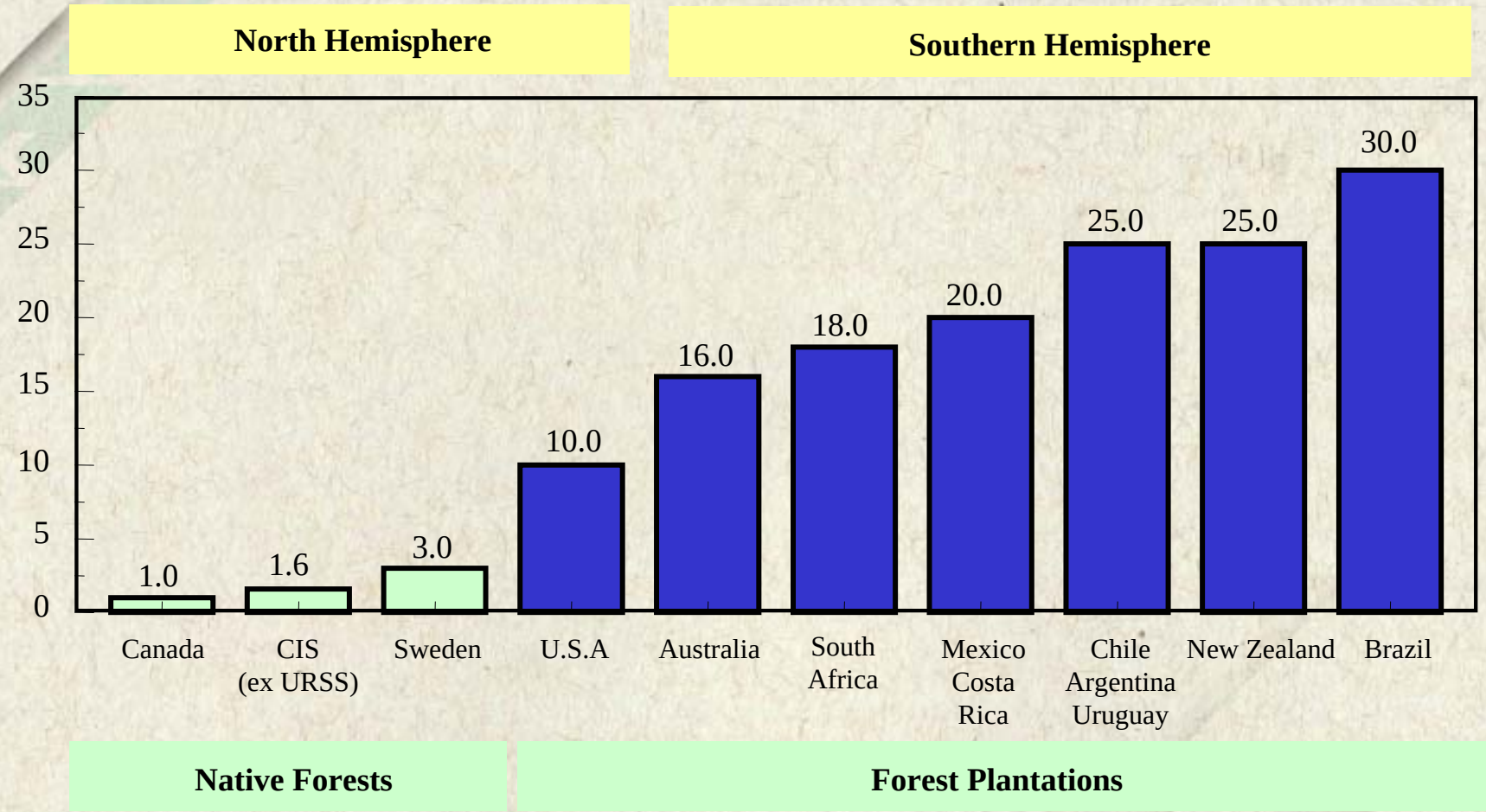
- According to FAO, the total harvesting (in logs) was 3.6 billion m³ in 1999.
- The industrial harvesting, excluding wood for fuel, was 1.9 billion m³.
- The annual growing rate was 1.2% per year, from 2000 to 2010



Source:FAO data, Jaakko Pöyry Projection

Average Growth of Forests

Cubic meter/Hectare/year (conifers)



Source: New Zealand Forest Research Institute and Chandler Fraser Keating

Why is it necessary to certificate Forest Plantations?

3. Because planted forest certification, by FSC, in Brazil and in other developing countries, resulted in the progress of forest management with social, economics and environmental benefits and their multiplier effects.

The productive chain in forest planted basis in Brazil, brings into:

- 1.5 million of direct jobs
- 5.2 million of contractors workers
- Value generation: US$ 20 billion/year (4.5% of GNP [PIB])
- Export: US$ 3.4 billion/year
- Taxes: US$ 3.4 billion/year
- Planted area: 5 million ha(± 200 million agriculture + cattle breeding)
- Preservation areas: 1.6 million ha
- Wood production: 102 million m^3/year

Why is it necessary to certificate planted forest?

3. Because the forest certification is and it will be more and more important for spreading out the Brazilian wood supplies (mainly in the European and North American Market).

- It rises jobs and incomes.
- It rises exchanging value.
- It makes Brazilian Companies more competitive.

Furniture industries in Brazil

- 15,000 small and medium size companies*
- 177,000 direct jobs*
- Sales: US$ 2.9 billion (2003)*
- Export*: US$ 40 million in 1990
  US$ 661 million in 2003
- **More than 90% of raw material come from planted forests.**

*** Source: ABIMOVEL**

Why is it necessary to certificate planted forests?

4. Because it will guarantee a sustainable development policy, able to generate continuous environment services and products directed to well being, removing any accusation of endangering biodiversity and ecosystems.

First world X Developing countries

Forest certification in developing countries opposes First World interests in forestry products business because:

- Planted Forests high productivity
- Technical advantages resulting in high quality products and in low prices and low competitive costs.
- **Strong competition to the First World's wood products.**

First world X Developing countries

More than 150 million ha of Forests were certified until 2003:

	ha million
- PEFC	48
- SFI	39
- FSC	37
- CSA	14
- American Tree Farm	11

- Nowadays, Brazil has 2,3 million ha certified by FSC (Forest Stewardship Council). 1,0 million are planted forests

(july 2004)

Klabin – Plantations certified by FSC

-Forest Plantations allows **continuous production and high quality raw material guarantee for industry.** Evident economics and social benefits were brought to the regions where these plantations were established (Paraná and Santa Catarina States) .

- In **forest partnership program**, the small farms are previously evaluated and planned in order to establish reforestation only in areas with land use capacity for forests.

- **There is no conversion of natural forests into plantation.** All planted areas was been used before to forest plantation or other soil uses. (the areas are not used by agriculture or cattle raising). Mainly, these areas are degraded ones.

Klabin
Forest Plantations Certified by FSC

- **Managed forests diversification.** Pinus, eucalypts and Araucaria forests plantation; pulpwood production; logs for timber and lumber production (forest products multiple use); preservation of native forests.
- **Landscape**: Planting with different species; rotations and ages, intermixed with preserved native areas. The area is covered by a high hydrological net.
- **Forestry Partnership Program**: This program's objective is to reduce pressure to native forests and to generate income and employment for small land owners.

-**Wood Industrialization District**: Set up in 1993, attending a partnership with the municipality, creating new job opportunities and growth for region.

-49 companies has been established in 2.1 million m^2. They consume 900.000 t of wood per year, generating job for 2,700 people.

Klabin
Forest Plantations Certified by FSC

- **Forestry Management Plan in accordance to FSC principles and criteria.** There's a strong commitment to improve in environmental, economic and social issues.

- **Diversification in forest use.** Management of non timber forest products (management of medicinal plants and phytotherapics/ phytocosmetics)

-**Permanent Preservation Areas Recovery.** Forestry Sector has been a model in attending the legislation demands. (Gica Watershed Project and Native Tree Species Production).

-It has been developed research in order to use **watersheds monitoring** to define maximum area for clear cutting.

- **Roads and accesses maintenance** - Main roads are well located, with a good rain flowing off system, avoiding damage to soil and water quality.

Klabin
Forest Plantations Certified by FSC

- **Exotic planted species are adapted to the region.** The genetic material for clonal propagation are selected after several years of research and improvement. The plantation of this material is limited to 50% of the annual planting area and in a maximum of 200 ha per clone.
- **Adopting well known methods of preventing and controlling insects and diseases** (like the biological monitoring of the wood wasp and pine aphid). These programs presented good control results.
- **Pine natural regeneration are being controlled in areas** out of plantations.
- **Around 39% of the total Klabin areas are protected native ones**
- (Paraná – 85,000 ha and Santa Catarina – 32,000 ha:
- Legal Reserve, Preserved Native Forests, RPPN (Private Natural Preservation Reserve)
- **Methods that reduce soil damaging are used for soil preparation**

Klabin
Forest Plantations Certified by FSC

-**Soil mapping**: Soil physical and chemical characterization to identify and define:

-Natural fertility and physical conditions

-Erosion risk

-The idea is to use these informations to decide silvicultural operations in the different areas.

- **Forestry protection**: To prevent forest fires, comprised by the following structure: Radio Communication System with Geographic Information System (GIS), Fire Observation Towers, Fire Trucks, Water Supply Points and Motorcycle equipped crew.

- **Environmental planning**: The Company and its partners conduct studies to define the best way to identify possible environmental impacts in the harvesting operations, and they are used to look for solution to avoid these environmental impacts.

- **Contractors Monitoring:**

The Working conditions provided by contractors for their workers, are monitored continuously by the Company, as:

- Taxes payment
- Employees Registration
- Food and water quality
- Medical Exams
- Meal places conditions
- Fuel and oil storage conditions
- Safety equipments utilization
- Training
- Payment

Klabin
Forest Plantations Certified by FSC

Environmental Projects:

(It's given opportunity for graduation and post-graduation students to develop scientific researches):

- Mammals Survey
- Birds Survey – Varanal Forest
- Amphibians Survey – PhD degree (finished)
- Varanal Phytosociology
- Native Bees Survey Project
- Native Fishes Survey Project
- Maned Wolf Project
-Piping-guan (Jacutinga)/Solitary Tinamou (Macuco) Project
- Native Snakes Survey

Klabin
Forest Plantations Certified by FSC

- Pteridophyte Project

- Feline Management

-Capuchin monkey Project

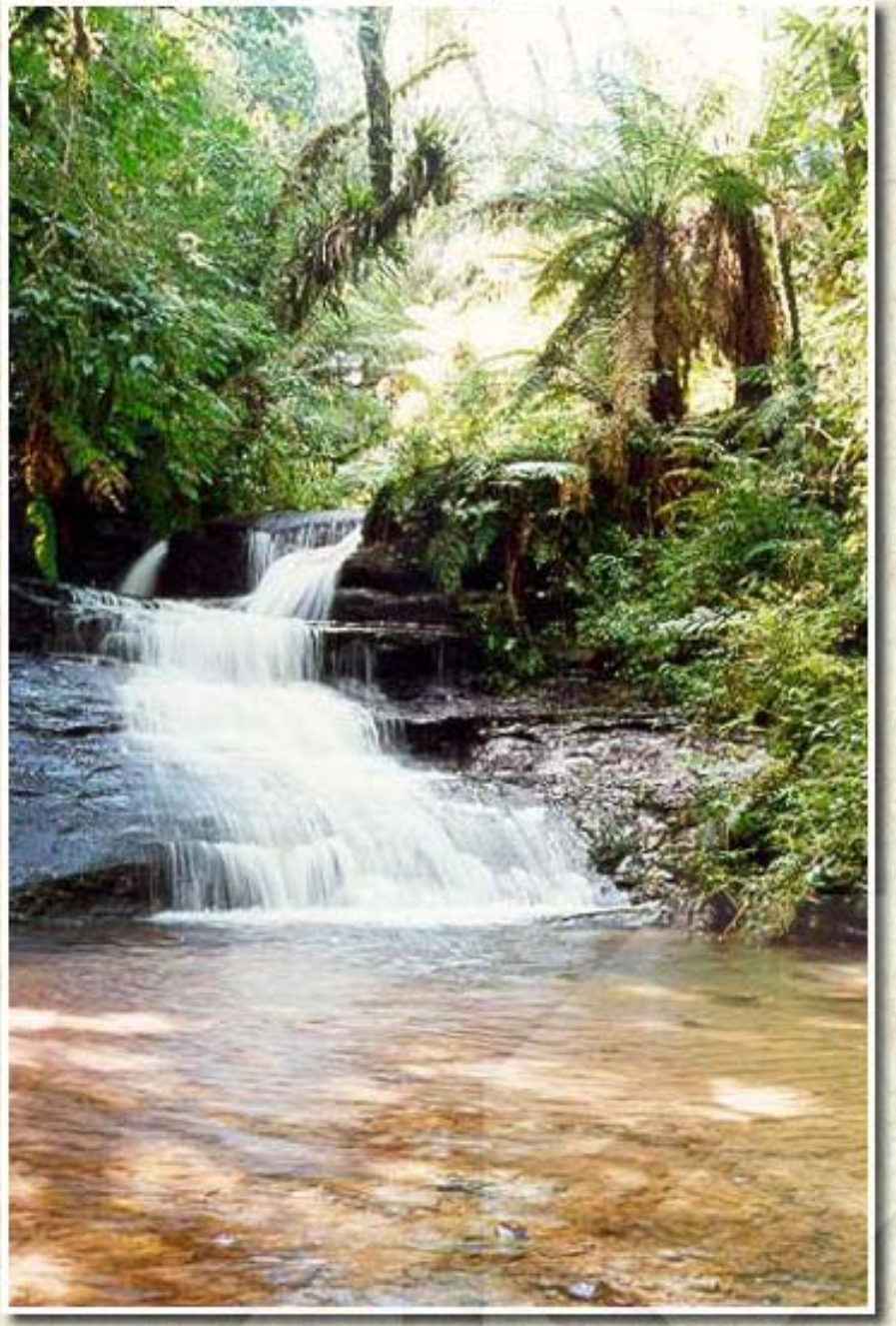
- Watershed Monitoring Project - PROMAB/REMAM

- Native Species seedlings production

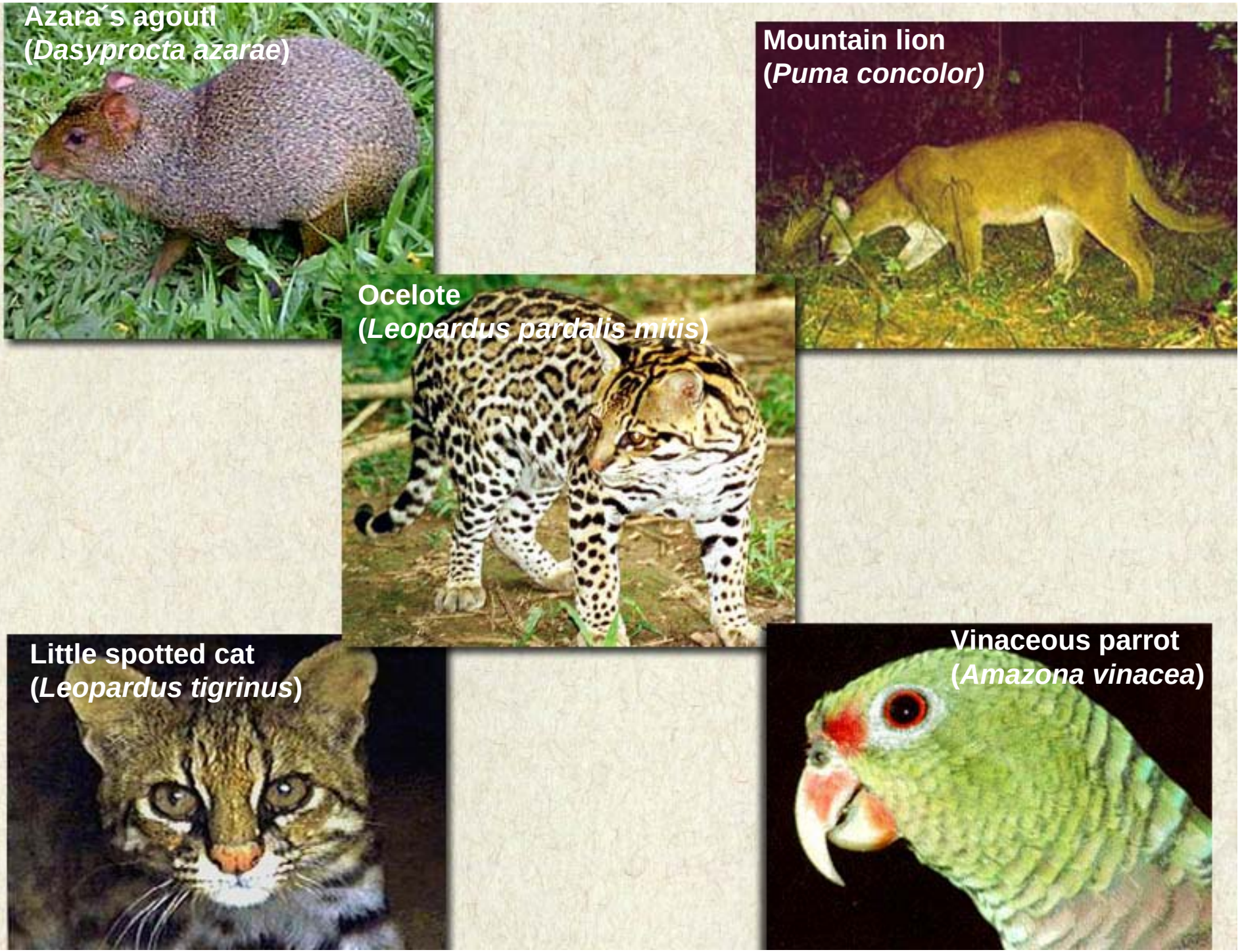
- Environmental Education Project

- Monte Alegre Project – Botanical Identification of All plant species occurring in the area

- **Internal audits** are conducted four times per year. They strengthen the monitoring system of the whole aspects of well managed forests according to the FSC P&C. All areas are audited (in forest and offices), including the activities that are developed by contractors.




Ocelote
(*Leopardus pardalis mitis*)
Lesser brocket
(*Mazama nana*)
Margay
(*Leopardus wiedii*)
Giant anteater
(*Myrmecophaga tridactyla*)
Royal flycatcher
(*Onychorhynchus swainsoni*)


Azara´s agouti
(*Dasyprocta azarae*)
Mountain lion
(*Puma concolor)*
Ocelote
(*Leopardus pardalis mitis*)
Little spotted cat
(*Leopardus tigrinus*)
Vinaceous parrot
(*Amazona vinacea*)