

## Final Presentation

Introduction to the Amazon:

**BASIC FACTS:** What makes the Amazon unique:

FYI's, conditions that make a rainforest, uniqueness  
Size, biodiversity stats,

### **Conditions for existence of rainforest**

The two factors which enable a rainforest to exist are an almost constant temperature and a high, regular precipitation rate. These two characteristics are the basis for all functions which occur.

### **What makes a rainforest unique?**

The actual forest begins with a thick, nearly impenetrable wall of trees, vines, and shrubs. Once inside this wall, the forest is actually very open, with relatively little underbrush. The forest is comprised of several canopy levels, each with its unique group of flora and fauna. The physical structure of the forest is very efficient, capturing most of the sunlight before it reaches the ground story. This is the reason for relatively little vegetation on the floor of the forest.

### **Soil FYI**

Most of the nutrients in the forest are locked up in the vegetation. The soil is not very rich or thick. It is estimated that there is only about 1" of leaf litter and 1"-2" of topsoil.

However, the conditions in the rainforest (high moisture and warm temperature) allow for a very quick decomposition rate, so nutrients are recycled very quickly.

### **Biodiversity FYI**

Brazil alone has between 10 and 20% of the world's biodiversity, with approximately 500 species of mammals<sup>1</sup>, 1600 species of birds<sup>2</sup>, and 1 million species of insects<sup>3</sup> and 50,000<sup>4</sup> species of plants in a 2.5 million square mile area<sup>5</sup>.

### **Exports FYI**

Many of the products that are important in the world economy are native to Brazil, including ground nuts, Carnauba wax palm, rubber trees, guarana, pineapple, cashew nuts as well as many species necessary for medicinal purposes.<sup>6</sup>

### **Conditions for biodiversity**

The dense population of tall trees creates a canopy that creates a constant warm, humid and dimly lit environment to the lower layers. In these unique conditions, many there are species that have only evolved in the Amazon.

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<sup>1</sup> <http://www.pbs.org/journeyintoamazonia/enter.html>

<sup>2</sup> <http://www.txdirect.net/sitc/sci-rain.htm>

<sup>3</sup> <http://www.pbs.org/journeyintoamazonia/enter.html>

<sup>4</sup> First National Report for the Convention on Biological Diversity - Brazil

<sup>5</sup> <http://www.pbs.org/journeyintoamazonia/enter.html>

<sup>6</sup> First National Report for the Convention on Biological Diversity - Brazil

### **Intro to cycles**

The high density of life results in a very fast turnover of nutrients in the environment. Almost all nutrients are stored in the biotic parts of the ecosystem. Waste matter of plants and animals is quickly metabolized by decomposers and re-incorporated into living organisms. Due to this, the effects of removing biotic elements from an area can have very serious effects (see Human Impact: Deforestation and Monitoring: Biomass)

### **HOW IS THE AMAZON BENEFICIAL?**

#### **Rainforest key to storing CO<sub>2</sub>**

The forests play a key role in the storage of CO<sub>2</sub>; if they are eliminated, the excess of CO<sub>2</sub> in the atmosphere can result in global warming.

How much CO<sub>2</sub> is taken out of the atmosphere by the Amazon.

If there was no rainforest, what would be wrong with the planet?

Ans: CO<sub>2</sub> levels, biodiversity, medicines... check and encyclopedia.

### **INTRODUCTION TO THE PLAYERS**

*IBAMA (Brazilian Institute for the Environment and Renewable Natural Resources):*

Background: The IBAMA, the Brazilian Institute for the Environment and Renewable Natural Resources, is the critical environmental governing agency of the Brazilian Government. It regulates the use of the environment, especially the rainforest. It is responsible for creating laws restricting logging, farming, land-clearing, construction, deforestation, waterway use, and air regulation, amongst other things.<sup>7</sup>

*CONAMA: The National Environment Council (CONAMA)*

The National Environment Council (CONAMA) was created by Brazilian environmental Law No. 6,938 in August, 1981. According to the First national report for the Convention on Biological Diversity, "CONAMA establishes the norms and criteria for the licensing of polluting or environmentally damaging activities and determines, whenever necessary, research on alternatives and of the possible environmental consequences of public or private projects."<sup>8</sup>

*Amazon Region Protected Areas (ARPA) Project:*

The aforementioned Amazon Region Protected Areas (ARPA) Project is a 10 year

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<sup>7</sup> No author. "The ARPA (Amazon Region Protected Areas) Project Overview: Report PID11197." 9 May 2002: n. pag. On-line. Internet. 12 October 2002. Available WWW: [http://www-wds.worldbank.org/servlet/WDS\\_IBank\\_Servlet?pcont=details&eid=000094946\\_0205170414391](http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000094946_0205170414391)

<sup>8</sup> (AUTHOR UNKNOWN). "First national report for the Convention on Biological Diversity. Chapter IV Legislation, Policies and Programmes: Implementing Article 6 of the Convention on Biological Diversity".

government program. It was created to establish a "mosaic" of protected areas in the Brazilian Amazon. Each year, it expands its ambitions, as it works towards its goal of rainforest conservation.

### American Relations

Congress biannually reviews foreign aid, including aid to Brazil. There are many American conservation groups, including Greenpeace and Amazon Conservation Team (ACT), which have already established strong public relations with important US politicians and representatives.

### International Relations:

Japan: The Japanese Government is conducting a National Network Genome Project with incredible success in the Amazon near the Rio Negro River. This demonstrates their interests in the Amazon and their potential willingness to aid in further research and preservation.

Holland: A Dutch group named the National Institute of Amazon Research (INPA) is a leader in Amazon research. Future research support and cooperation can be expected of this group and similar organizations.

### *Economic Characterization*

As of the 1990 estimate, 17.4% of the population lies below the poverty line, with an unemployment rate of 7.1% (2000). The tenth of the population with highest income receives 47.6% of capital earned, while the bottom tenth receives only 1% (Central Intelligence Agency). This type of wealth distribution has been a significant contributor to social conflict and the recent regime change.

The debt to GDP ratio increased 26% between 1994 and 2002, with the Net Consolidated Public Debt of R\$708.45 billion, i.e. 56% of the GDP.

Def'n of a player: any individual, group, government, or company, that impacts or is impacted by the well-being of the rainforest.

#### Impacters:

Ranchers, farmers, politicians (laws), logging companies, mining companies, energy plants, fossil fuel emissions, etc.

#### Impactees:

Indigenous people (well-being fluctuates with the well-being of the rainforest)

## **HARMS**