Opportunities for Environmental Research in **Brazil**

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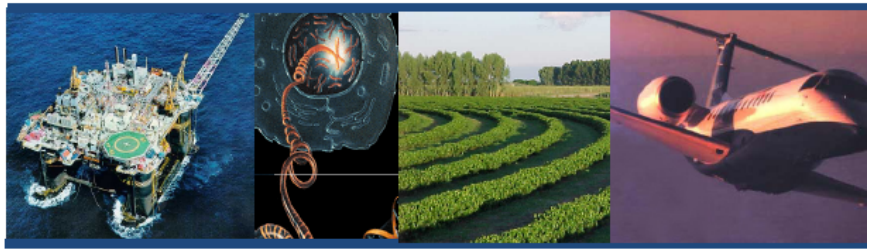
WHY HAVING PROJECTS WITH BRAZIL?

There is a Brazil that most people know

Amazon forest | Soccer | Carnival | Coffee

It keeps being successful, but there is still more to know

The Brazil you must know



Technology, Innovation, Competitiveness

A strong academic base

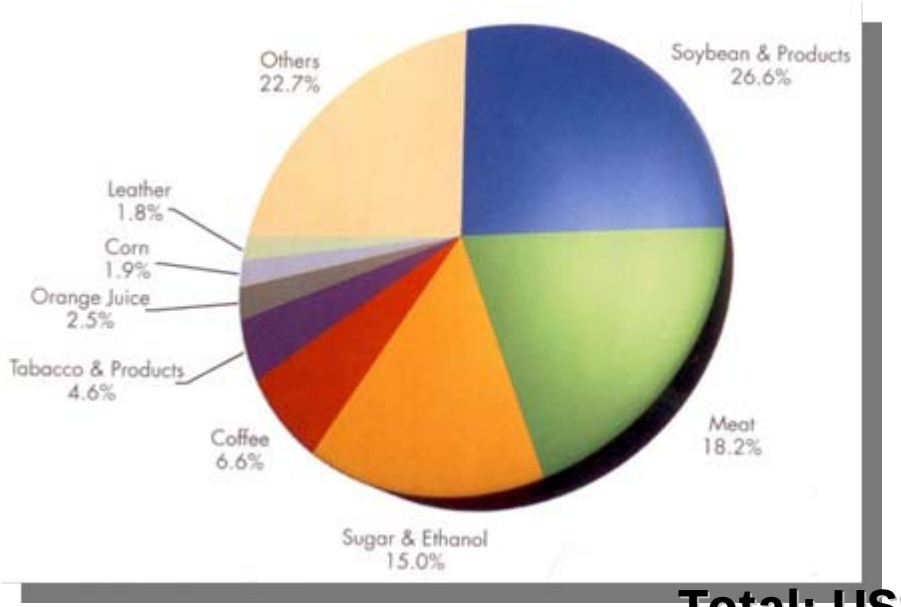
10,000 doctors trained every year
16,000 scientific papers
Rank 13 in scientific publications
A growing intensity of industry R&D

The Atlas of Ideas – Demos Institute, 2008
"It is helpful to think of Brazil as a 'natural knowledge-economy'... its innovation system is in large part built upon its natural and environmental resources, endowments and assets."

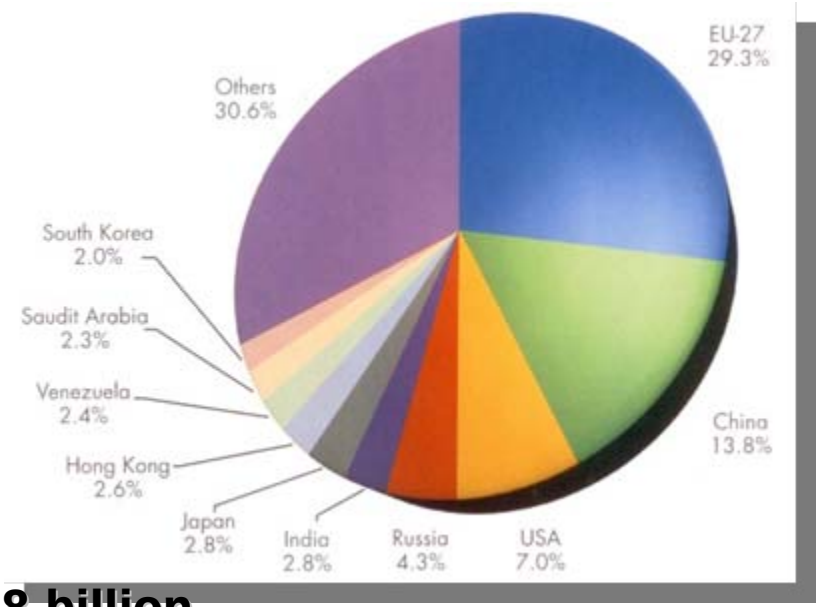
The Economist - Nov. 14-20, 2009
"A country with the world's largest freshwater supplies, the largest tropical forests, fertile land that in some places allows up to three harvests a year, and huge mineral and hydrocarbon wealth."

BRAZILIAN TOPICS: TECHNOLOGIES RELATED TO THE INTERFACE BETWEEN ENVIRONMENT AND AGRICULTURE

Brazilian Agribusiness Exports Main Products



Brazilian Agribusiness Exports Main Destinations



Total: US$ 64.8 billion

Source: Ministry of Development, Industry and Foreign Trade – 2009
Elaboration: Ministry of Agriculture

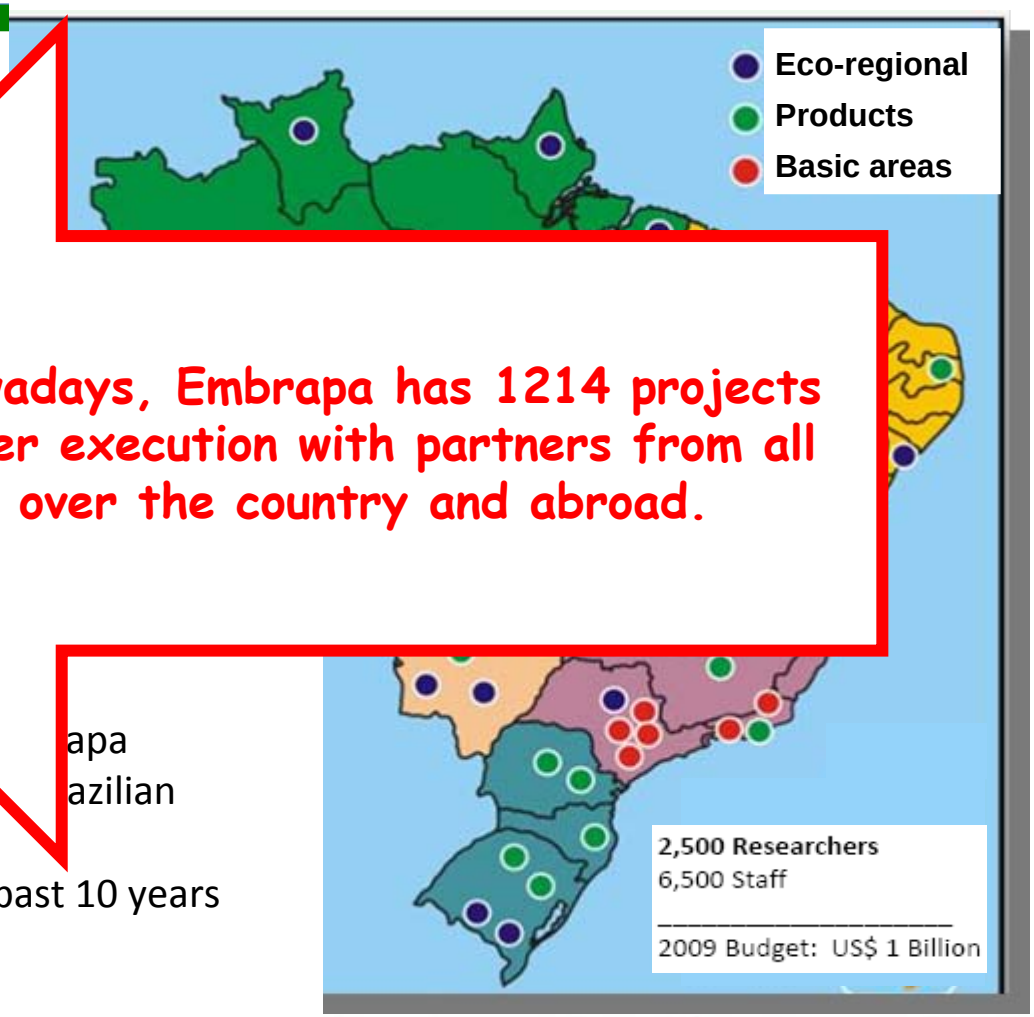
WHY IS EMBRAPA REPRESENTING BRAZIL?

The Brazilian Agricultural Research Corporation – Embrapa

The largest Agricultural R&D System in Latin America

Contributions of Embrapa

- Advanced Production Sy
- Agroindustry
- Environ
- Regi



Nowadays, Embrapa has 1214 projects under execution with partners from all over the country and abroad.

EMBRAPA REGULARLY PU

BALANCE

- Every Brazilian Real (R$) invested i apa returns between R$ 12 and R$ 14 to th azilian society (US$ 1.00 = R$ 1.70)
- The social balance of Embrapa in the past 10 years amounts to US$ 49.7 billion

Other Research Institutions in Brazil: Interface Environment/Agriculture

UNIVERSITY OF SÃO PAULO/USP

-Largest higher education and research institution in Brazil

-Public and free university

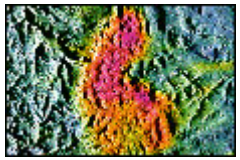
-7 campi, 40 learning and research units, 5 hospitals, 5 museums, 5 specialized institutes, besides multiple experimental laboratories and centers of scientific and cultural diffusion

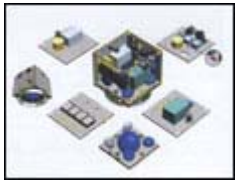
-Graduate studies at USP, with more than 500 fields of concentration areas (MAs and PhDs), are an international point of reference in Science and Technology

-One of the main institutions in science, technologies and teaching

Other Research Institutions in Brazil: Interface Environment/Agriculture

NATIONAL INSTITUTE FOR SPACE RESEARCH

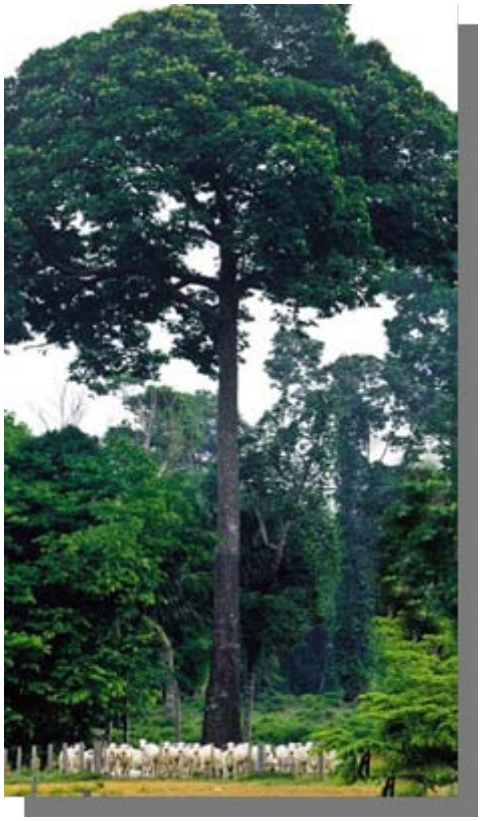




- Space and Atmospheric Sciences
- Weather Forecast and Climate Studies
- Space Engineering and Technology
- Satellite Tracking and Control
- Earth Observation
- Integration and Testing Laboratory

http://www.inpe.br/ingles/index.php

Major topics in Environmental Research in Brazil: interface with Agriculture



Sustainable Increase in Agricultural Production

Sustainable Utilization of Altered Areas

Humid Forests Sustainable Use

Alternative Energy

Climate Change

Public Private Partnerships

RESEARCH INTERESTS

Our Major Research Topics:

- ✓ Waste
- ✓ Energy efficiency
- ✓ Eco-efficiency

- Transversal topics:
- ✓ Water
- ✓ Soil

RESEARCH PLATFORMS

- All the projects of the same research area are components of the platform
- Different types and sizes of projects with budgets varying from US$ 15.000,00 to 2.000.000,00
- Different proposals
- The idea is to cover all the specific themes related to the research area with independent projects, which are connected by the platform

WASTE

- **WASTE RESEARCH PLATFORM**

✓ Objectives: reuse/recycling, C sequestration, recovery of degraded areas, economic valorization

✓ Products: fertilizers, phytopathogen suppressors, energy sources, co-products with added value

WASTE

- **WASTE RESEARCH PLATFORM**

✓ Techniques: composting, slow pyrolysis, disinfection, agro industrial processes, biodigestion and energy generation

✓ Environmental impacts assessment

✓ Main wastes: regionals (cassava, heart palm, cashew, etc.), urban (sewage sludge, organic waste), agro industrial (sugar-cane, açai palm, animal production) and industrial (mining waste)

ENERGY EFFICIENCY

BIOENERGY RESEARCH PLATFORM: Use of biomass for energy production

✓Crops and forests: sugar cane, palm, canola, soybean, castor beans, physic nuts, eucalyptus, native forest species

✓Studies:

- Sustainability of energetic cropping systems
- Evaluation of environmental, social and economic impacts
- Efficiency maximization of biofuel production
- Genetic improvement
- Production of second generation ethanol and other biofuels

ECO-EFFICIENCY

- **BIOPROSPECTION PLATFORM**
  - ✓Biologic control
  - ✓Medicines
  - ✓Drought resistance
  - ✓Food conservation
  - ✓Rock phosphate solubilization
  - ✓Waste treatments (composting)
  - ✓Biological Nitrogen Fixation
  - ✓Biofuel production

International Cooperation is Key to Brazil

International Cooperation at Embrapa

Our Belief

As the world becomes more interconnected and challenges become more complex, it will be increasingly necessary to work through intense cooperation.

Multiple Strategies

Multilateral Cooperation

Technology Transfer Offices

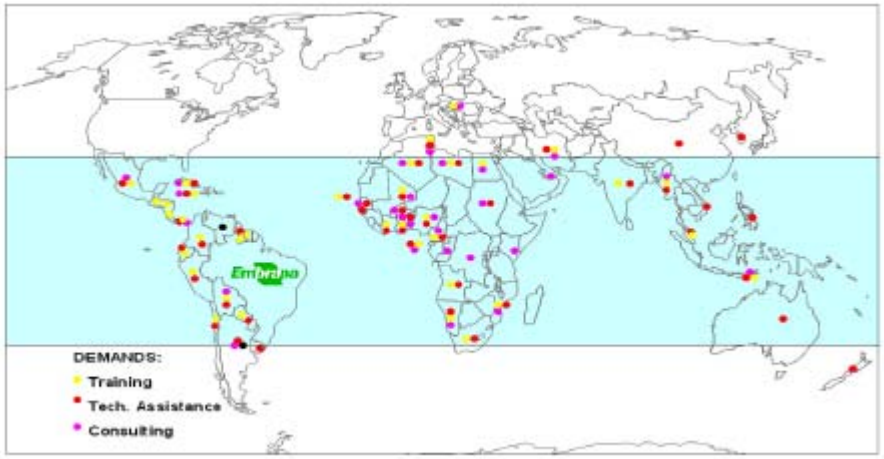
Virtual Laboratories Abroad- Labex

Public-Private Cooperation

ACHIEVEMENTS

Inter-American Development Bank

JICA



Today Embrapa has:
78 bi-lateral agreements with 89 institutions in 56 countries;

Multilateral Agreements with 20 International Organizations;

Regarding projects, there are numerous agreements involving several countries, organizations and research networks.

OPPORTUNITIES FOR EU RESEARCHERS

- ✓ Embrapa has several ongoing projects related to the interface between environment and agriculture

- ✓ We are open to all types of partnerships in all the areas of our scope. This is done through the partnership objective definition, the project elaboration followed by the submission to open calls from different funding sources

OPPORTUNITIES FOR EU RESEARCHERS

- ✓ Funding sources options:
- Government funding agencies (state and federal): some has specific calls, some are continuous flux of submission

São Paulo Research Foundation

http://www.fapesp.br/en/

National Council for Scientific and Technological Development (CNPq) - linked to the Ministry of Science and Technology (MCT)

http://www.cnpq.br/english/cnpq/index.htm

Brazilian Innovation Agency – Public Owning company subordinated to the Ministry of Science and Technology (MCT)

http://www.finep.gov.br/english/folder_ingles.pdf

OPPORTUNITIES FOR EU RESEARCHERS

✓ Funding sources options:

- Submit as a partner to Embrapa calls (a researcher from Embrapa must be the leader): usually are 2 calls/semester

-Institutions interested please select the areas and contact us: adriana@cnpma.embrapa.br

Thanks

APORTA: Supporting EU Access to Brazilian National Research Programmes

for the opportunity!

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