Fundamental Objectives of LBA

- To improve the understanding of the Amazonian ecosystems through complementary and integrated scientific studies in the following areas:
  - Physical Climate
  - Hydrology and Water Chemistry
  - Carbon Exchange
  - Nutrient Cycling
  - Atmospheric Chemistry and Trace-gases (important greenhouse gases)
  - Land Cover and Land Use Change
  - Human Dimensions
- To encourage the participation of new researchers through grants for training and education, particularly in the Amazon region.
- To make research results avaliable for the support and promotion of the development of alternative conservation and sustainable land-use practices in Amazonia.

Data sets are available at CPTEC/INPE website: http://lba.cptec.inpe.br/lba/

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LBA

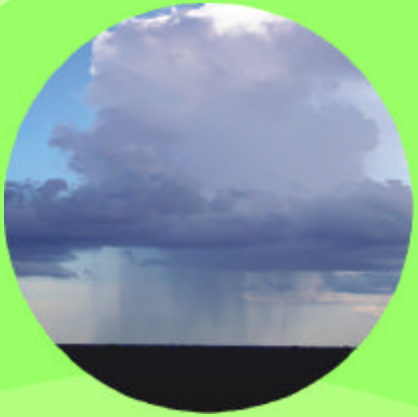
Large Scale Biosphere-Atmosphere Experiment in Amazonia

Amazonia - the last great tropical forest domain and the largest hydrological system in the planet. Highly integrated, these natural systems play an important role in the function of regional and global climates.

How do these environmental systems function?

How do changes in natural Amazonian cycles affect life on Earth?

LBA Program integrates knowledge to understand the Amazon.



- How does the Amazon terrestrial biosphere interact with the atmosphere?
- Is the Amazon forest a source or a sink of carbon?
- What is the regrowth capacity of deforested areas?

Impacts on the ecosystems may produce irreversible effects and change the climate of the region, the continent and the world.

The understanding of the Amazonian ecosystems will contribute to the development of techniques for sustainable use of the land in the Amazon environment.

Scientific research is still necessary to find answers to the many questions about the regional and global impacts of human activities.

The need of developing scientific studies for the understanding of the regional and global functioning of the Amazon motivated the creation of LBA - Large Scale Biosphere-Atmosphere Experiment in Amazonia.

The Brazilian Ministry of Science and Technology - MCT is responsible for the policy management of LBA, under the direction of the Secretariat for Polices and Programs of Science and Technology. The National Institute for Space Research - INPE is responsible for the scientific coordination of the Experiment.

Based on international cooperative agreement, LBA has important institutional linkage with approximately 40 Brazilian institutions, 25 institutions from various Amazonian countries, as well as institutions from the USA and 8 European nations.

Scientific expeditions involving foreign nationals follow the norms established by the Brazilian Government and involve an evaluation from CNPq and the approval of the Ministry of Science and Technology.

The LBA-DIS (Data and Information System), operated in Brazil, provides the storage, search-engine, and the sharing of data gathered in research. According to Brazilian policy, original data sets remain in Brazil.

Atmospheric and ground data are obtained from the entire region.

Towers equipped with instrumentation measure greenhouse-gas fluxes, oxidants and aerosols.

Satellite imagery and remote sensing provide large-scale data.

Scientists and students: working together to strengthen research capacity in the Amazon.