Conservation and Sustainable Management of Below Ground Biodiversity

FAST FACTS

Achieved: Developed standardized methods for sampling and categorizing below ground biodiversity.

Where: Brazil, Côte d’Ivoire, India, Indonesia, Kenya, Mexico, Uganda

Cost: GEF funds: about $9 million; Co-financing: $9.9 million

When: August 2002 to August 2010 for two phases.

Partners: International Centre for Tropical Agriculture-Tropical Soil Biology and Fertility Institute (CIAT-TSBF); Brazil: Universidade Federal de Lavras; Côte d’Ivoire: Université de Cocody; India: Jawaharlal Nehru University; Indonesia: Universitas Lampung; Kenya: University of Nairobi; Mexico: Instituto de Ecología, Xalapa; Uganda: Makerere University

Achievements

The project established tools and practices for evaluating below ground diversity and created a handbook for future use. Methods were tested at sites in seven countries. Baseline assessments were established for future study. The project demonstrated effective and efficient alternative management practices that can be used in sustainable agricultural production.

Legacy

Lasting effects include:

- Methods for evaluating soil quality that integrate biological, chemical and physical qualities and that facilitate local and regional soil quality and biodiversity monitoring.
- National inventories that set a basis for future assessments.
- Further use of methods for new projects including one in Uganda where extension services put the lessons of the project to use in growing soybeans.
- Inoculums developed by the project being used in Mexico in experiments with maize and *palma comedor*.
- Alternative management practices based on the use of bio-fertilizers put into practice in the areas.
- Control methods used that successfully stem fungal and viral infections in lily bulbs.
- The project’s influence as a precursor to the GEF/UNEP’s carbon benefits project that is developing cost effective carbon-measuring tools and methods.
- Information on carbon account and sequestration that enhances confidence in trading carbon from terrestrial sources.
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Publications:
Handbook on Tropical Soil Biology is available at: www.bgbd.net

Outputs and Deliverables
- Handbook on Tropical Soil Biology, a publication that offers tools and methods to catalogue below ground diversity and establishes baseline assessments for monitoring losses.
- Comprehensive and systematic assessments of below ground biodiversity conducted by national teams in seven countries.
- The discovery of new species in areas including the Brazilian Amazon and Mexico’s Los Tuxtlas.
- Training courses for participants that encouraged south/south cooperation.
- Completion of masters and doctorate degrees for students involved in project research activities.
- Experiments on working farms conducted with farmers’ participation and input.
- Production of educational materials for school-age audiences about the importance of soil biodiversity.

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