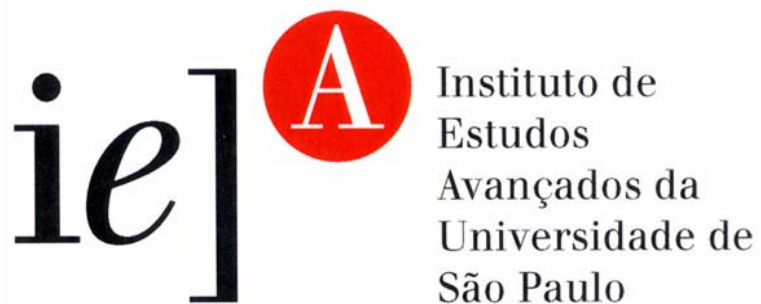


The Background on Floram Project

Jacques Marcovitch



Text available at www.iea.usp.br/english/journal

The opinions here expressed are responsibility of the author and do not necessarily reflect the beliefs of IEA/USP.

The Background on Floram Project*

Jacques Marcovitch

There has been a great deal of interest in how the basic idea for a forestry project as comprehensive as Floram evolved. Many find it hard to understand why IEA was the cradle of a project oriented to the ecological and biological sciences. Would it be a concession to the fads of the last quarter of this century? Or the result of a long and deep rooted concern with the planet's future?

As Floram Project becomes known in Brazil and elsewhere, many questions arise about its developers and the procedures followed to generate the reports it has published. Inquiries about its methodological approach have emerged because it is a pioneering initiative and a unique undertaking for the Institute.

The answers to these and other questions are given by some of the key actors who designed the original project: Aziz Ab'Sáber, José Goldenberg, Leopold Rodés, and Werner Zulauf. Their statements served as the basis for the information provided to readers about the early days of Floram Project.

INTERNATIONAL PRESSURE

During the second half of 1988, public opinion in several countries, including Brazil, voiced a strong protest against aggressions committed to the environment around the world. The response of the scientific community was a shift in priorities to focus on alternatives to practices harmful to the environment. Among the many scientific meetings called to discuss the issue, the congress on "Climate and Development" held in November 1988 in Hamburg and attended by professor Wilfried Bach from Munster University had an unquestionable impact.

Its purpose was to discuss the "greenhouse effect." During the meeting there was a confrontation between the researchers committed to environmental issues and those of the nuclear energy lobby. The dispute arose because advocates of more widespread use of nuclear power endorsed the criticism against environmental pollution caused by the

* This text has been extracted from the special issue of *Estudos Avançados* on Floram Project, published in English in 1995. The original version, in Portuguese, was published in no. 9, May-Aug. 1990.

overuse of fossil fuels, and instead proposed a boost to the number of nuclear plants. This suggestion was rejected by researchers due to the risk of another disaster like Chernobyl.

The argument led Professor Bach to ask the Brazilian delegates the following question: "With such a vast territory and a climate so favorable to fast forest growth, why doesn't Brazilian develop a major reforestation effort to trap in its plant canopy the excess carbon floating in the atmosphere?" It was obviously a challenge. The Brazilian delegates, Werner Zulauf among them, took due note. In December of the same year, the recommendation was disclosed to researchers involved with environmental and energy issues in Brazil in an article written by Zulauf for the daily "Folha de São Paulo." So, while the idea for a massive forestry project may be attributed to the German scientist, professor Zulauf must be credited with its disclosure and dissemination.

IEA TAKES ON THE PROJECT

After discussing the idea raised at the Hamburg meeting with Werner Zulauf, in May 1989 Professor José Goldemberg — then president of the University of Sao Paulo — asked me if IEA might look into the matter. The need for Brazil to join in the world-wide effort against the "greenhouse effect," its expertise in forestry-related activities, and the availability of qualified human resources and research groups in this field were some of the driving forces behind the project's development.

The subject was brought up before the Institute and examined by a group consisting of Aziz Ab'Sáber, Werner Zulauf, Leopold Rodés, and myself. To convert the proposal outlined into an IEA project the group had to meet several times and the work was done in steps. Professor Ab'Sáber accepted the task of drafting the project's content and guidelines were set on topic development and methodology. The idea was to have the project open to anyone involved in forestry-related issues, including both ecologists who oppose destruction of our forests and businessmen who rely on forests for their basic inputs.

The mandated goal was to develop a plant canopy restoration project for Brazil, with emphasis on forests. Meanwhile, in the first half of 1989, the Institute's international affairs department began to feel it was vital for Brazil to step out of its defensive position. The country was facing a barrage of international criticism for the way it handled environmental matters. It seemed obvious, therefore, that any attempt to move into a proactive posture would require a responsible attitude through a sound forestry project.

For the next phase, the original IEA group was joined by Antonio Rensi Coelho, Geraldo Forbes, James Wright, Leopoldo Brandão, Luiz Barrichelo, Mauro A. de Moraes Victor, and Nelson Barbosa. The new extended group was invited to discuss the content, format, and tentative draft of Floram Project.

DOVETAILING CONTRIBUTIONS

The appointment of this enlarged group was instrumental in providing a much-needed complementarity of viewpoints, crucial in any interdisciplinary and intersectoral undertaking like Floram Project. Thus, the views of Aziz Ab'Sáber, a geographer active in research and field surveys all over Brazil, were combined with the technological expertise of researcher and industrialist Leopold Rodés, and — last but not least — with Werner Zulauf's knowledge and his long-standing familiarity with environmental protection issues. They were joined by Professor José Goldemberg who added his own background of physicist specializing in energy problems to round off the multidisciplinary approach desired for Floram.

By June 1989, Floram was already outlined and blueprinted. Around that time, group member Leopoldo Brandão visited China to look at a forestry development set up to meet the rising timber demand. The 8 million-hectare development was funded by the World Bank primarily to increase the supply of timber, largely used in China as firewood for cooking and in home heating. A reforestation expert from the private sector, Leopoldo Brandão collected a sizable amount of information on the large-scale and low-cost-per-hectare Chinese reforestation programs. The data were invaluable during Floram's early stages.

Leopoldo Brandão also made a major contribution to the project by giving it a national and global perspective. As a leader in the manufacturing industry, he approaches the initiative with a responsible attitude and great sensitivity to the interests of future generations. Others contributed in equally important ways. The opinions of Luiz Barrichelo, from the Forestry Department of the Escola Superior de Agricultura Luiz de Queiroz (ESALQ), Mauro Victor, Nelson Barbosa, and Antonio Rensi.

Coelho added impressive knowledge of forestry-related issues plus the know-how in raising the much-needed funds for afforestation projects.

A number of meetings both large and small were held among the extended group members. Geraldo Forbes' and James Wright's interventions helped steer activities along

Many find it hard to understand why IEA was the cradle of a project oriented to the ecological and biological sciences.

IEA guidelines, i.e. making sure the project would indeed take an interdisciplinary and prospective approach from the outset. In short, the group had a remarkable awareness of its long-term and nation-wide responsibilities and a pragmatic attitude.

PROJECT ASSUMPTIONS

Brazil can contribute to international efforts to sequester carbon dioxide by planting extensive tracts of vegetation within its territorial boundaries, with several additional advantages. By developing a well-structured project, Brazil will be morally entitled to demand counterpart action from the post-industrialized countries most heavily responsible for releasing CO₂ into the atmosphere. At the same time, it can build enormous plant reserves for a variety of industrial purposes to benefit the country. Functions and safeguards have been included to ensure the project will be environmentally and socially sound, and to prepare it for implementation at short notice. According to professor Ab'Sáber, Floram can be started any time within the next ten years and from any of a set of defined sectors; despite its comprehensive scope and the misnomer "megareforestation," Floram is in fact a summation of many local projects centered around a carefully determined forestation and reforestation typology.

Designed as a reforestation project to benefit the global environment (the Portuguese acronym FLO = forests + AM = environment was proposed by Rodés), it encompasses socially-oriented forests, plant canopy for soil rehabilitation, forests to stem desertification, forests to restore and retain drainage, hybrid forests with social-economic-cultural implications, forests and woods to prevent conurbation, wooded and green urban belts, reforestation and wooded tracts with rugged species for the Brazilian semi-arid (Floram – the Dry Northeast).

These assumptions had to be carefully defined for operational consistency in situations viewed as mutually exclusive because of sheer prejudice. The intention therefore was to strike a balance between the processing of forest products and environmental preservation; differentiated plant cloning and biodiversity; the operations of large corporations and "social-forestry" activities for small and medium-sized companies. The strategic approach taken ensures the viability of forestry developments suggested by Floram.

DEBATE WITH 100 LEADERS

The project's ideas gradually took shape and were revised by the extended group throughout the second half of 1989, thanks to the tireless efforts of its core group (Aziz, Rodés, and Zulauf). Since the project was intended to involve all of society, on December 14, 1989, a decision was made to submit its draft to the appreciation of a hundred leaders from key forestry-related sectors. Individuals engaged in research and environmental issues and representatives from manufacturing, timber processing and marketing companies as well as reforestation developments were invited. The purpose was to present the preliminary document to everyone concerned with forestry matters for their comments.

A decision was made to submit its draft to the appreciation of a hundred leaders from key forestry-related sectors.

Discussions took place on February 21, 1990, and were based on previously circulated texts (IEA/Papers, Environmental Sciences Series I, II, and III — Floram Project: A Preliminary Approach). During the meeting and in addition to hearing from the audience, several letters containing substantive opinions were read. The debates provided invaluable inputs to enhance the document. Floram Project ideas and goals had clearly elicited a positive response.

Two promising announcements were made at the meeting. Murillo Passos and Aldo Sani — respectively from Companhia Vale do Rio Doce (CVRD) and Riocell — revealed that similar activities to Floram's philosophy were already under way in the areas where their companies operate. CVRD has a reforestation project in a one-million-hectare tract, while Riocell is using reforestation to deter desertification in the state of Rio Grande do Sul. These facts are encouraging because they endorse the fact that Floram is not just a plan, but an incentive to decentralized environmental preservation efforts through extension of the plant cover.

FLORAM'S CHARACTERISTICS

Since early discussions of the project, it was agreed that the same rationale and characteristics underlying its design should guide actual implementation. What is the rationale behind these characteristics?

First of all, the need to offer the Brazilian people an alternative solution to environmental problems through useful and viable practices that will benefit the present and future generations. Second, to take an interinstitutional and interdisciplinary approach. Which means that the creation of new institutions must be avoided; instead, networks will

be built around existing talents who will remain attached to their original institutions. The reason for interdisciplinarity is that Floram's complexity requires a dovetailing of knowledge, a procedure similar to the one adopted by its original creators. Third, the University's commitment to act as a forum for meetings where society's leaders can interact and freely generate proposals of interest to the entire population. This is expected to reflect the global interests of the Brazilian people. Everyone (from "green" extremists to staunch utilitarians) will have an opportunity to reach negotiated solutions around a plan that will be reviewed and eventually adopted.

THE NEXT PHASE

The project's third phase is only beginning. On the one hand, detailed studies have yet to be completed. Concurrently, the project must be shown to those most closely involved with implementation proper. As soon as the introductory documents are ready the project will be handed over to existing specialized institutions or agencies in the various Brazilian regions. Implementation now depends on fine-tuning its requirements for each Brazilian region, on setting up a network to combine the efforts of all key players, and on funding.

Local customizing will provide an accurate snapshot of each site and determine the form of reforestation best suited to a particular location. As far as the University of Sao Paulo is concerned, the ESALQ, acting through its Forestry Sciences Department, and Instituto de Pesquisas e Estudos Florestais (IPEF) can play a major role in broadening discussions and in helping the project become fully decentralized in subsequent stages.

The network-like organizational structure ensures that existing talents will work around a common strategy. Networking prevents the parasitic expansion of bureaucratic activities, enhances existing institutions, and gives priority to the goals of projects requiring mass mobilization such as Floram.

Funding depends on a set of factors ranging from property prices to forest development costs. Encouraging information from abroad points to the possibility of debt-for-nature swap arrangements with lender countries, in addition to funding from multilateral banks wishing to forge a "green" alliance. These sources are still to materialize but, in combination with funds from industry and state governments, they would make the project viable.

IEA is offering the Brazilian people a project that can contribute to a positive solution for a world problem (contamination of the biosphere by carbon dioxide emissions). Now it is up to society to discuss, amend, and customize the project, and to optimize its multipurpose goals to benefit each Brazilian region, the country, neighboring nations, and mankind.

BIBLIOGRAPHY

AB'SABER, Aziz. Zoneamento Ecológico e Econômico da Amazônia: questões de escala e método. São Paulo, *Revista IEA*, Vol 3, n° 5, jan/abril/1989, p.4-20.

BRASIL FLORESTAL: Ano 2000. Diretrizes Estratégicas para o Setor Florestal Brasileiro, São Paulo, Grupo de Planejamento Estratégico Florestal, 77 p., dezembro/1981.

BROWN, Lester R. et alii. *State of the World*, New York, W.W. Norton & Co., 1989, 256 p.

FULLER, Kathryn S. Debt-for-Nature Swaps: a new conservation tool. USA, in *World Wildlife Fund Letter*, World Wildlife Fund, 1988.

GUOJIAN, Han. Grandiosa Obra Ecológica. Beijing, China, *Semanário Beijing Informa*, n 26, p. 16-26, junho 26/1990.

LARREA, Roque Sevilla & Quesada, Alvaro Umaña. *Por Qué Canjear Deuda por Naturaleza ?* Equador, Fundación Natura, 30 p.

McNEELY, Jeffrey A. *Economics and Biological Developing and Using Economic Incentives to Conserve Biological Resources*. Gland, Switzerland. IUCN — International Union for Conservation of Nature and Natural Resources, 236 p., November, 1988.

MARCOVITCH, Jacques & RODES, Leopold. Grupo de Debates sobre Planejamento Estratégico para o Setor de Celulose e Papel: a experiência brasileira. Washington, USA, *Revista Ciência Internacional da OEA*. Vol. 22, n° 3-4, P. 24-28, julho/1982.

MINITZER, Irving, *Economics of Environmental Protection*. USA, in *Journal of Policy Analysis and Management*, 1988.

POSTEL, Sandra & HEISE, Lori, Reforesting the Earth, in Brown, Lester R. et alii *State of the World*, New York, W.W. Norton & Co., 1988, 256 p.

REPETTO, Robert. *Promoting Environmentally Sound Economic Progress: what the North can do*, New York, WRI — World Resources Institutes, 21 p., 1990.

SEDJO, Rodger A. Forests: a tool to moderate global warming?. Washington, *Environment*, Vol. 31 (1), p. 15-20, January/February/1989.

THE WORLD BANK. *Funding for the Global Environment*. Discussion Paper, February, 1990.

ZULAUF, Werner Eugênio. A Reversão Florestal. *Jornal Folha de São Paulo*, C.2 — Cidades, 7 de dezembro de 1988.