

Remarks on Floram Project

Benedito Vasconcelos Mendes



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.

Remarks on Floram Project*

*Benedito Vasconcelos Mendes**

Given its global scope and the need of vast areas in many countries for reforestation purposes, Floram Project cannot exclude the dry (arid and semiarid) regions because of their geographical significance. One-third of the Earth's surface is taken by dry lands. Fully half the countries in the world are either partly or entirely located in arid or semiarid land. The semiarid tropics alone cover approximately 20 million square kilometers spanning all continents, accounting for over half the tillable land available in the world.

1. Floram Project must have a socioeconomic development plan for the northeastern semiarid based on agroforestry and livestock breeding.

In global terms, Floram Project places ecological considerations over and above economic issues. It follows that nationally also its main objective should be enriched by local environmental and social elements if the Project's universal goals are to be achieved. In this regard and because of its sheer size, a poor and numerous population, and highly sensitive ecosystems, the Brazilian semiarid Northeast must be given priority in any national reforestation plan ranking ecological and/or social benefits higher than purely industrial interests.

We suggest that reforestation in that region focus primarily on rural development and desertification control, with top priority assigned to social and environmental issues rather than economic ones.

Climate and soil deficiencies are a limitation for pulpwood production. However, this does not preclude reforestation with multipurpose perennial xerophilous species like fruit trees and fodder producing plants. Other possibilities are sources of industrial raw materials such as oils, wax, rubber, resins, tannin, cosmetics, pharmaceuticals, fibers, etc. Allegations that the northeastern semiarid should not undergo reforestation because its phytomass would not have high yields are unacceptable, particularly in a predominantly ecological project such as Floram. On the contrary, the northeastern semiarid is naturally prone to desertification and therefore deserves special treatment vis-à-vis the country's less deteriorated regions. It is a known fact that periodical droughts, climate and soil

* 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.

characteristics, and human encroachment translated chiefly in terms of indiscriminate forest clearing and overgrazing in the so-called Drought Polygon are the main causes behind the fast-paced desertification experienced by the region.

To reclaim the damaged areas of the dry Northeast we suggest that Floram Project consider adding an agroforestry action plan to promote regional socioeconomic development. Besides contributing at the local level toward its main objective, the project will incorporate additional environmental, social and economic benefits to this region and therefore to the country as a whole.

2. The northeastern semiarid has perennial xerophilous plants with high CO₂ fixation capacity, yielding products of great economic value.

In terms of CO₂ fixation and return on investments made, reforestation with fruit, fodder, and industrially useful (oils, waxes, resins, etc.) perennial xerophilous trees would meet both requirements. Some of the species recommended for reforestation present high yields in commercially valuable fruits, industrial inputs, and phytomass.

3. The northeastern dry region has extensive land available for agroforestry and livestock breeding activities.

The northeastern semiarid has vast tracts of land available for reforestation which now lay idle. They are low cost cleared land not under tillage at the moment. Agroforestry and livestock raising programs could turn these unfilled lands into highly productive areas where environmental as well as social and economic development concerns can be satisfactorily met.

4. Floram Project could gain additional multipurpose reforestation actions by including 5 million hectares in the northeastern semiarid.

Considering the very poor state of environmental preservation found throughout Brazil, the 71.8% rate of industrial reforestation envisaged by the Project seems too high. We recommend that this ratio be reduced by increasing the area under multipurpose reforestation with 5 million hectares in the dry Northeast. Inclusion of the northeastern semiarid in large scale reforestation plans via a strategy based on agroforestry and livestock breeding policies will boost the ratio of ecological/utilitarian planting with regard to pulpwood producing. Reforestation of 5 million hectares with xerophilous species according to a plan involving the largest possible number of small and medium rural

To reclaim the damaged areas of the dry Northeast we suggest that Floram Project consider adding an agroforestry action plan to promote regional socio-economic development.

properties scattered throughout the nine northeastern states located in the semiarid will effectively prepare the Drought Polygon to face the hazards of periodical droughts.

5. Reforestation plans for the dry Northeast must consider the strategic criteria set by Floram Project for conservation and land use.

The strategies and action plans developed for "Reforestation and Land Use" by Floram Project are highly consistent with criteria to be met in the Socioeconomic Development Plan for this region, in turn based on agroforestry and livestock raising. We would like to suggest a few minor changes in those strategies and action plans, however, as indicated below:

REFORESTATION AND SOIL USE	
<p style="text-align: center;">STRATEGIES</p> <p>To integrate forestry activities in preselected areas with local livestock raising activities to boost productivity.</p> <p>To reforest sites in depleted soils for agricultural & livestock as well as soil rehabilitation.</p> <p>To include reforestation in rural area organization for diversification of economic activities.</p> <p>To increase the ratio of forest development for environmental conservation and control of desertification and/or soil erosion.</p>	<p style="text-align: center;">ACTION PLANS</p> <p>To stimulate agroforestry & livestock raising development.</p> <p>To provide integrated water resource management.</p> <p>To intensify reforestation at open areas, depleted locations, and on eroded soils.</p> <p>To survey occupancy rates at sites targeted for reforestation, balancing between preservation of natural and agricultural ecosystems.</p>

6. The Drought Polygon must generate technologies to produce high-value raw materials of vegetal origin.

The dry Northeast shows great potential for economic exploitation of xerophilous trees which produce industrial raw materials such as oils, waxes, rubber, tannin, resins, cosmetics, pharmaceuticals, fibers, etc. We suggest a few changes in the "Reforestation Strategies for the Dry Northeast *Sertões*" for replanting of this region with these species. They come under the heading "Strategies Specifically Targeted to Domains and Regional Sites," as follows:

STRATEGIES FOR REFORESTATION OF THE DRY NORTHEAST *SERTÕES*

STRATEGIES

Strong and permanent efforts to generate technologies for proper exploitation of industrially useful xerophilous trees that supply oils, waxes, rubber, resins, and other products.

To reforest the banks of the region's 70 thousand weirs with xerophilous fodder legume trees and/or xerophilous fruit trees.

To reforest river and seasonal creek banks with native species.

To increase the area of cashew tree groves along the dry coasts of Rio Grande do Norte and Ceará as well as in dry rural areas, the local *cerrados*, and low plateaus.

To reforest high *caatingas* with *umbuzeiros*, e.g. the Paraíba Cariri region, Seridó Range in Rio Grande do Norte, the Piauí hinterlands, and Pernambuco and Bahia *caatingas*.

AREAS

XXV NE Backland (semiarid Hinterland) Reforestation sites with adaptable species & ecological reforestation of river banks.