



Report on Visit to Las Gaviotas and Marandúa **October 14-17, 2006**

Written by

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A. Objective of the Report

On the basis of a 3-day visit by a delegation of 30 personalities from Europe, Japan and the United States a diverse group of investors, philanthropists, academics, policy makers and environmental activists, an assessment was made on

- (1) Achievements of the Environmental Research Center Las Gaviotas, directed by Dr. Paolo Lugari; and,
- (2) The expansion of the program to regenerate the rainforest in the same geographical region in cooperation with the Colombian Air Force.

This summary report offers the core findings of the delegation.

B. Background

The visit to Colombia offered an opportunity to verify first hand a project that was initially presented to an international platform of scholars on the occasion of the Club of Rome meeting held in Bogotá in February 1984. The vision presented was that we can reverse the present destruction of ecosystems through the regeneration of a rainforest that once thrived in the area.

Dr. Aurelio Peccei, founder and then president of the Club of Rome left impressed with this capacity to act positively and over the next two decades Paolo Lugari set out to implement this vision. Today an 8,000 hectares forest emerges in the savannah. The original species is the Caribbean pine tree, the only known that can withstand the harsh conditions. This renaissance of the rainforest provides a livelihood for the local population through the tapping and processing of resin and the production of drinking water.

The experience gathered in this breakthrough project permits to envision the expansion of this project in the next phase to 100,000 hectares thanks to a collaborative program between the

Colombian Air Force and the ZERI Foundation. The Colombian Air Force wishes to make land of its airbase in the region available to the ZERI Foundation, which has been accompanying the Gaviotas experience since the beginning of the reforestation program.

Access to the region is difficult due to the lack of transport infrastructure and lodging facilities. However, thanks to an extraordinary effort from the Colombian Air Force and through the coordination of the Colombian office of the ZERI Foundation a select group of persons was invited to assess the existing forest, and acquire a direct impression on the viability of the expansion, which after its initial expansion phase could reach several million hectares of land. The Colombian Government has committed to make this land available on the condition financing is forthcoming. Financial institutions have offered such support.

C. General Observations

In name of the participants we confirm that we were duly impressed by what has been achieved in Gaviotas - both in terms of biodiversity and in terms of economic activities. The drinking water project and the colophon production offer value-added products and provide Gaviotas with stable revenue. The experience clearly demonstrates the potential for the much larger project that will now be embarked upon in cooperation with the Colombian Air Force.

We appreciate the difference between Gaviotas and Marandúa - both in scale and scope. Marandúa presents a real challenge, not least to organize and integrate all the refugees with ex air force staff, former guerrilla and para-military who wish to reintegrate into civil society. It is clear that many will be offered jobs that are being planned in and around the regeneration of the forest, the production of food and the building of houses and local infrastructure.

We realize that a lot of efforts will have to be made to manage such a large-scale project professionally navigating through uncharted territory. However, we are confident it can be done successfully - first because of the good experience provided by Gaviotas, second because of the fact that the ecosystems framework is now well understood so that this can be part of the new development. The main challenge as we see it will be in the social sphere, i.e. the successful integration of people who have been uprooted from their traditional livelihoods and offered a new start in Marandúa.

One of the salient features of the visit was the dialogue with the top representatives of the Colombian Air Force, including the Commander in Chief General Jorge Ballesteros. We came from the meetings and the visit with the clear impression that the Air Force is really planning for peace! The logic presented by General Jorge Castro and the multiple meetings with the officials at different levels demonstrated to the delegates:

- (1) An in depth understanding of the process,
- (2) The commitment to the long term goals of regeneration of the rainforest with particular social and ecological benefits for both the local communities, and the global society; and,
- (3) An agreement on the short-term plan of action.

We believe that the organizational strength and the discipline of the Air Force combined with the technical and financial support of the ZERI Foundation will contribute fundamentally to the sustainable development of Colombia.

D. Detailed Observations

On Biodiversity

1. Even though the reforestation started with the planting of one pine species only, we could clearly observe the sprawling biodiversity of dozens of species. We were not equipped to undertake a detailed analysis, nor did we have the time, but the hypothesis that a monoculture of a non-dominant pine species leads to the creation of the physical, biochemical and biological conditions in the ecosystem to stimulate it to diversify and strengthen is clearly confirmed. This is a most encouraging perspective and a remarkable new opportunity for the global society.
2. We could observe that non-pine tree species have overtaken the pine forest and that thick undergrowth dominates the forest canopy. Whereas the soil in the savannah is almost void of any organic matter, the newly generated forest, which was first planted some 22 years ago clearly regenerated a 10 to 15 centimeter thick top soil. Apart from the rich diversity of shrubs, plants and trees, there is also an apparent diversity of bird species. Even the fungi are thriving.
3. The savannah is the dominant ecosystem around the forest. The grass species are clearly visible in corridors that have been created to protect the planted trees from neighboring wild fires. The forest strung around the rivers provides rich pockets of biodiversity that supply the biogenetic material as soon as the pine trees provide cover against the sun and (as we are told) shift the pH from 4 to 6.

On Economics

4. The local community enjoys a thriving economic activity. The newly generated forest supplies first and foremost water, which is flowing with the force of gravity to the lowest point and is pumped with windmills into the converted hospital where the water is bottled according to the national regulations. The tapping and the collection of the resin from the pine tree, its processing into colophone and the thinning of the forest are clearly viable activities which provide jobs and livelihoods.
5. All energy is locally generated from renewable sources. This is a remarkable achievement, especially since the energy sources are a mix of a micro-hydro electric plant, wood powered steam generator, biodiesel powered generator and biodiesel driven local transport, solar powered telecommunication systems and even a solar cooker.
6. All employees and staff are most cordial and demonstrate a versatile way of communicating in a professional manner about their jobs. The management seems decentralized with great levels of responsibility at the local level. The level of job satisfaction is obviously high.
7. The manufacturing plant operates at full capacity. The increased tapping of resin requires additional processing capacity, which is scheduled for 2007. We were informed that further refining of the raw material is planned with a total of 6 products extracted from the resin offering more value added and lower fluctuations in revenue. The location of the factory next to the newly generated forest increases considerably the value added generated in the region.
8. The economic viability of the project depends on the infrastructure. Whereas Gaviotas is landlocked and depends on the roads, Marandúa benefits from an impressive network of rivers which could be navigable all year around with direct access to the Caribbean and beyond through the network of the Orinoco river, and Bogotá through the Rio Meta. There is a need to prioritize these investments in navigability if the expansion program is to be successful.

9. The new plantation of rubber, palm and cashew trees in Marandúa shows great perspectives. Whereas this is a departure from the pine tree strategy of Gaviotas, the 3 species are planted according to their biological limits, i.e. the palm tree only represents 15% in the Amazon forest, and therefore only 15% of the space is reserved for palm. This leads to a diverse but productive forest. The one-year-old plantation has performed very well. The local farmers who will see an expansion of this experimental area with 20 hectares before the end of 2006 secure the maintenance.

10. At the global level this project represents one of the largest initiatives imagined for the sequestration of carbon dioxide. Since we witnessed the conversion of a savannah into a full forest, we recognize the massive potential for contributing to climate stabilization through voluntary schemes in cooperation with international agencies and financial institutions. In addition, the exclusive use of renewable energy sources also qualified for carbon credits. The voluntary carbon credits can undoubtedly contribute to the financial underpinning of this initiative.

On Community

10. The community of Gaviotas is a sea of peace in a country known for its violence. The air force base in Marandúa radiates a calm and secure atmosphere.

11. Gaviotas has demonstrated that the combination of a core of long-term residents with up to 25 years of experience in the region combines very well with the flow of refugees who find a new home, or who take on temporary work. The integration of people from diverse backgrounds seems to function well. The cultural activities and the school are apparently smoothly organized.

12. Marandúa will face a major challenge in building its community but the experience in Las Gaviotas shows that it is not impossible. There were no signs of violence or distrust and the region has been free of kidnappings, attacks or human rights violations. The Ambassador in Sweden in a separate meeting confirmed that the human rights performance of Colombia has made dramatic improvements recent years and that major regions are now enjoying a relative peace status.

13. The relationship of the Air Force and the local population is cordial. We were received at the local people's home and when in the Air Force Base, the officers vacated their private quarters to host all of us. It is hard to imagine anywhere in the world such a display of hospitality. We were able to talk freely to anyone all the time and felt very welcome. The local population and the military were very open-minded and most thankful for us having made the effort to come.

14. The provision of food and housing is clearly a major challenge, especially when one discards the possibility to import construction materials and food from outside the region. This will complicate the start-up phase. However, if successful it would maintain a large amount of the investment into the region thus creating a self-sustaining local economy.

On the Project Design and Implementation

15. The projects of Gaviotas and Marandúa are not designed on ready-made truths and orthodoxies. The project does not only challenge common wisdom, rather it is about finding new truths from local knowledge provided by local people and local circumstances and then acting up it. This requires a broad understanding of the fundamentals while having the patience to observe the phenomenon itself. The rewards of this exercise were obvious to us.

16. The project has achieved the present status by bringing in the best expertise available.

The project could not have been achieved without the relentless search for the right expertise and getting things done.

17. The project demonstrates that a lot can be achieved if one builds up networks of trust. The ultimate manifestation of this can be witnessed in the partnership between ZERI and the Colombian Air Force. At first this may seem an unlikely partnership but building trust, thanks to listening to each others judgment and demonstrating patience, leads to a determination and devotion to see this initiative succeed navigating through constantly changing circumstances.

E. Recommendations

1. The project must be presented to development banks as well as development cooperation agencies at the international level. We feel that the eco-systems approach proven by Gaviotas and chosen as the development model for Marandúa is unique and ought to be an example for others. We are prepared to assist the project team in such endeavors.

2. The social aspects of the project receive special attention, for instance by inviting well experienced civil society organizations to play an active role in the project. We believe that organizations like Plan International based in Sweden with broad experience in Latin America could be such an instrument. We can provide the high level introductions to enter in such cooperation agreements.

3. Leading environmental organizations - like UNEP and IUCN - will be given an important role in monitoring the environmental performance of the project. This could lead to the creation of a permanent monitoring and research station comparable to the IUCN research base in Galapagos Islands (Ecuador).

4. The Colombian Government should be the “owner” of the initiative with the support of international financial community. To that effect, there is a need to create an executive team that will “drive” the project forward. Apart from the Colombian Air Force, which impressed us as mentioned, we did not have the opportunity to exchange view with any official from the government. We recommend that the ZERI Foundation plays a catalytic role in securing that the highest office of the country assumes the leadership role this project deserves.

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Mexico, Brussels and Helsinki
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