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February 16, 2004

Initial Review of  
Forest Stewardship Council Certification  
of  
Plantation Forests of PLANTAR S.A.  
in the Curvelo Region  
in the Minas Gerais State, Brazil  
Certificate Number: SCS-PM-00004  
Awarded: August, 1998  
and  
Certificate Registration Number: SCS-FM/COC-00004P  
Certificates awarded by: Scientific Certification Systems, Oakland, California

## 1. INTRODUCTION

At the request of Jutta Kill, FERN/SinksWatch, I have reviewed publicly available materials related to the certification of eucalyptus plantations established and managed by PLANTAR S.A. (PLANTAR). These Forest Stewardship Council certifications were carried out by Scientific Certification Systems (SCS) of Oakland, California in August, 1998 (Certificate Number: SCS-PM-00004) and in May, 2003 (Certification Registration Number: SCS-FM/COC-00004P).

I was asked to conduct this review by Ms. Kill due to my background in forest management and in forest certification which may be summarized as follows:

- Bachelor of Science in Forest Management and Forest Science, Master of Forestry in Forest Ecology and Silviculture, and course work completed towards PhD. in Forest Ecology.
- Thirty years of experience in industrial forestry, scientific research, ecosystem-based planning and work with Indigenous and non-indigenous rural communities to plan ecologically and culturally sustainable forest management.
- Founding director of the Silva Forest Foundation (SFF), an organization which was a founding member of the Forest Stewardship Council (FSC) and an accredited FSC certifier, Registration Number 007, April 17, 2000. Accreditation was voluntarily relinquished in January, 2003.
- Developed and refined SFF's certification standards under which I served as the lead auditor in two FSC certifications conducted by SFF.
- As an accredited certifier, participated in the review and testing of the Forest Stewardship Council BC Regional Standards.

Hence my qualifications provide a solid base of experience through which I may review the process and some of the issues associated with the two SCS certifications of PLANTAR in the Minas Gerais State of Brazil.

From the outset I want to be clear that this is an initial review because the documents that I have been able to obtain and analyze provide insufficient information and detail to reach clear conclusions regarding the many issues surrounding the PLANTAR certifications. As will be explained more fully below, this situation needs to be remedied by both SCS and FSC if there is to be public confidence and technical transparency associated with the PLANTAR certifications.

While I raise below some issues related to forest ecology and forest management associated with the PLANTAR certifications, I also wish to be clear that I am not a tropical forest ecologist or tropical forest manager. However, I have attempted to restrict my discussion of forest ecology and forest management issues to general topics that apply to a wide range of forest ecosystem types and forest management systems. These issues are also areas of concern for others who have reviewed the PLANTAR certifications.

My review will contain the four sections as follows:

- DOCUMENTS REVIEWED
- GENERAL ISSUES
- SPECIFIC ISSUES
- RECOMMENDATIONS

## 2. DOCUMENTS REVIEWED

The following documents were reviewed for preparation of this initial review. The reviewed documents that formed the basis for my initial review of the PLANTAR certifications are:

- 1) *Public Summary Report*, PLANTAR S.A., Certificate Number: SCS-PM-00004, Public Summary (update): March, 2001 by Scientific Certification Systems, Oakland, California; contact: Robert Hrubes.
- 2) *Public Summary, Recertification of PLANTAR S.A.*, Certification Registration Number: SCS-FM/COC-00004P, FINAL VERSION, May, 2003, Scientific Certification Systems, Emeryville, California; contact: Dave Wager.
- 3) *Certification Standards of the F.S.C – Forest Stewardship Council for Management of Man-made Forest Plantations in Brazil*, revised draft 7.1, August, 2002.
- 4) *Letter to executives and investors in the Prototype Carbon Fund (PCF)*, May, 2003, signed by Brazilian groups and citizens regarding issues associated with the PLANTAR certifications.
- 5) *Letter to Ken Newcombe, Fund Manager, Prototype Carbon Fund*, September 21, 2003 from churches, trade unions, local communities and citizens regarding issues associated with the PLANTAR certifications.
- 6) *Letter to Ken Newcombe, Senior Manager, Carbon Finance Business—World Bank*, September 17, 2003, from the signatories of the May 23, 2003 letter (number 4 above) regarding issues associated with the PLANTAR certifications.

- 7) *Nothing prevents the FSC certification?* World Rainforest Movement reply to the “Recertification evaluation of the plantation forests of PLANTAR S.A. in this Curvelo Region in the Minas Gerais State, Brazil”, date: unknown.
- 8) *Forest Fraud: Say No to Fake Carbon Credits* by Jutta Kill, FERN/SinksWatch, November, 2003, 12 pages.

### 3. GENERAL ISSUES

#### ***General Issue #1: Public summaries lack critical information.***

A major goal of Forest Stewardship Council certifications is an open, transparent process that may be understood by a broad spectrum of people (i.e. stakeholders), and a process that honours the spirit and intent of the FSC principles and criteria, as well as appropriate regional standards. Because the certification audit is a confidential report between the certifying body and the forest management operation being evaluated, the public summary published by the certifying body, or certifier, forms the basis through which a certification may be evaluated by stakeholders and other interested parties. In particular, the public summary forms an important basis for stakeholders and/or other interested parties to evaluate and potentially appeal an FSC certification. While summaries need to be both concise and written in plain language, they also need to be comprehensive and provide critical information in order that stakeholders and other interested parties may fully understand the certification decision.

Neither of the public summaries prepared by Scientific Certification Systems (SCS) provided any substantive information through which the forest management practices, treatment of employees, the ecological sustainability and the economic viability of PLANTAR’s eucalyptus plantations could be understood and evaluated. In particular, the following information is missing from public summaries and necessary to have a basic understanding of the PLANTAR certifications:

- a summary of the management plan used by PLANTAR with specific reference to long-term ecological sustainability and economic viability of the operation;
- summaries of key reports, plans, and results which form the basis for fulfilling important conditions of the certification; and
- summaries of key stakeholder consultations other than general issues raised in public meetings.

Without more detail provided in the public summary regarding these and other aspects of the PLANTAR certifications, and in the absence of easy availability of PLANTAR’s management plans, reports, maps, and monitoring data, one is forced to take at face value the comments made in the public summaries. In other words, without at least summaries of critical, social, and technical information, the public summaries provide no clear basis on which to evaluate the quality of PLANTAR’s forest management operations and whether or not their operations meet appropriate FSC standards, particularly the spirit and intent of the FSC principles and criteria, as well as regional standards.

#### ***General Issue #2: Clarity of the Public Summary for Recertification Evaluation.***

The *Public Summary for the Recertification of PLANTAR, FINAL VERSION, May 2003*, is very difficult to understand because the English grammar is incorrect throughout the document. The endemically poor quality of the writing in this public summary makes many of the statements

difficult to understand. One is left to speculate on the meaning of many statements throughout the document which leads to, at best, confusion and, at worst, significant doubt about the quality of the recertification audit.

In my opinion, it is an important responsibility of certifying bodies to ensure that public documents not only cover the full range of issues and information, but are also clearly organized and written for easy comprehension by a wide range of readers.

***General Issue #3: Long-term ecological sustainability and economic viability.***

The Forest Stewardship Council (FSC) *Principle #7: Management Plan* requires that “the long-term objectives of management, and the means of achieving them, shall be clearly stated.” The FSC criteria for Principle #7 detail documents, including maps and the rationale for annual harvest and species selection, that provide for the long-term means of achieving management objectives.

From my reading, neither of the public summaries address long-term aspects of PLANTAR’s management of eucalyptus plantations. As I understand it, PLANTAR’s eucalyptus plantations are managed on 21 year cycles. At the beginning of that 21 year period eucalyptus, a non-indigenous tree, is planted. Three harvests of eucalyptus ensue in the following 21 years: one cut at 7 years, another cut at 14 years, and a final cut at 21 years. The 14 year and 21 year cuts are made of wood fibre produced vegetatively through coppicing from the cut stumps. At the end of the 21 year period, the eucalyptus stumps are pulled from the ground and new eucalyptus trees planted, ostensibly to begin another 21 year cycle.

I would like to note that this description of eucalyptus plantation cycles is not clearly described in the SCS public summaries, nor in other documents directly associated with the certification. This is a significant omission because this management approach needs to be evaluated in the certification audit as to its potential ecological impacts, ecological sustainability, and economic viability.

In forestry, 21 years is a very short time horizon in forestry. However, the SCS public summary gives no indication that the short eucalyptus cycle of 21 years of intensive cropping for charcoal production does not result in negative soil, water, wildlife, and natural vegetation impacts that are inconsistent with *FSC Principle #6: Environmental Impact*. These same potential ecological impacts are of concern as to the long-term ecological sustainability of PLANTAR’s operations, particularly given the “low natural fertility” and “low organic material content” of the major soils in PLANTAR’s operations. These soil characteristics are described in the *Recertification Evaluation – Public Summary, May 2003* by SCS (reference #2 in DOCUMENTS REVIEWED). Considering the generally low productivity of the soils, coupled with inherent ecological stresses from plantation monocultures, a certification audit needs to carefully consider whether or not such an operation is ecologically sustainable in the long term. If this determination raises serious doubts, in my opinion the operation would not qualify under *FSC’s Principle #7: Management Plan*.

Long-term economic viability is also an important aspect of a forest management plan. Given the uncertainties about future productivity of PLANTAR’s eucalyptus plantations and the attendant costs of managing those plantations, including pulling stumps at the end of the 21 year cycle, preparing the site for planting, and planting new eucalyptus plantations, there will be significant costs associated with long-term management of PLANTAR’s operations. Will these costs be recovered through the sale of charcoal? Will the sites continue to produce wood fibre at a rate that provides for a viable economic return from the production of charcoal? These and other important questions associated with the long-term economic viability of PLANTAR’s plantations are not

addressed in the public summary and, therefore, do not appear to have been addressed in SCS's certification audit of the PLANTAR operations.

**General Issue #4: Stakeholder consultation.**

In the SCS public summary dated March 2001, there is little detail about interviews of public stakeholders. A short section deals with consultations made largely with what appear to be government or elected officials. This section concludes with the statement "The local Rural Workers' Union was not contacted, because there is no representative in the city of Curvelo. A meeting was set with the Forest Military Police of Curvelo, but no one showed up at the scheduled time." From this public summary it appears as though few, if any, local residents or company employees were interviewed during the audit.

In the *Public Summary for the Recertification Evaluation, May, 2003*, there is an extensive list of "entities invited to the public meetings and/or participated on the public consultation (sic)," However, there is little connection between the list of people invited to the public meetings and those who actually attended and offered comments. In addition, one does not know who was consulted in private sessions, and, for that matter, whether private consultation sessions occurred with a range of stakeholders. These issues need to be clearly defined in order for the certification to have credibility. In addition, the assertion made by some local people that stakeholder consultations were conducted in the presence of PLANTAR officials needs to be investigated. It would be highly irregular certification auditing procedures to conduct stakeholder consultations in the presence of the company or entity being audited for certification purposes.

In short, the two public summaries reviewed for the certification of the PLANTAR eucalyptus plantations do not give confidence that a comprehensive public consultation process was carried out with key individuals and groups regarding PLANTAR's operations in Minas Gerais, Brazil. Such a public consultation process would need to clearly demonstrate that:

- 1) a broad spectrum of local and regional stakeholders were contacted and consulted in appropriate circumstances;
- 2) consultations occurred in confidential ways and in settings comfortable to the stakeholders; and
- 3) results of stakeholder consultations were carefully researched, evaluated in terms of PLANTAR's operations, and acted upon in setting preconditions and/or conditions for certification under *FSC Principle #2: Tenure and Use Rights and Responsibilities*; *FSC Principle #3: Indigenous Peoples' Rights*; *FSC Principle #4: Community Relations and Workers' Rights*; and *FSC Principle #5: Benefits from the Forest*.

Neither of the public summaries reviewed gave confidence that these auditing principles were adhered to in conducting public consultations associated with the PLANTAR certification audits and recertification audit.

#### **4. SPECIFIC ISSUES**

The specific issues discussed below are often examples of the general issues raised above. While they are more focused than the general issues raise above, their precise nature as well as answers to questions raised by the issues, are uncertain due to the lack of information contained in the public summary reports and/or a lack of readily available public information regarding all aspects of PLANTAR's operations.

***Specific Issue #1: Missing information to evaluate certification.***

As described in general issue #1 the public summary reports do not provide specific information from, or summaries of, important materials associated with conditions attached to PLANTAR's certifications.

Examples of this problem from the *SCS Public Summary (Update) of March, 2001* are:

- 1) *Description of Reserve and Permanent Preserve Areas . . .* this report would be necessary to review to understand whether or not reserves established in PLANTAR's operations meet FSC standards for protection of the environment and/or for full benefits from the forest.
- 2) *Complete Map Covering Current Soil Uses . . .* this map is important to review to understand ecological characteristics of PLANTAR's operating area and to assess potential impacts of eucalyptus plantations on the ecological functioning of the area under management.
- 3) *Reports with General Descriptions of Insects, Mammals, Snakes, and Bird Fauna . . .* review of this report is important to evaluate the effectiveness of current reserves in protecting the environment as well as the impacts of PLANTAR operations on the environment.
- 4) *Consolidated Report on the Biodiversity and Environmental Quality Monitoring Program . . .* this report would provide valuable information about the condition of forest ecosystems as a result of PLANTAR management. Such information either needs to be summarized in a public summary report and/or made available in its entirety in order to evaluate whether or not PLANTAR has met the requirements of *FSC Principle #6: Environmental Impact*.

These are a few of the examples from the *SCS Public Summary (Update) of March, 2001* that need to be summarized in the public summary, or made easily available in their full text in order to audit or adequately evaluate whether or not PLANTAR's operations in Minas Gerais warrant FSC certification.

The list of documents described above were itemized in the *Public Summary (update) of March, 2001* by SCS as providing evidence that various conditions of certification had been fulfilled. However, when one reviews the *Recertification Evaluation, Public Summary Report of May 2003*, there appears to be contradictions, for example:

- In the March 2001 public summary, one is led to believe that the description of reserves is clearly identified (condition 98-1). However, in the May 2003 public summary there is an indication that there is not "clear classification of the conservation areas and infrastructure areas." (condition 2002-01)
- In the March 2001 public summary, SCS indicates that a "consolidated report" has been completed that describes native vegetation cover, fauna, and water quality; thereby fulfilling condition 98-7. However, in contrast, condition 2002-02 in the May, 2003 public summary indicates the need to improve the fauna survey and monitoring programs. As well, condition 2002-02 indicates that there is a need to "realize adequate scientific studies for the fauna characterization on the company's FMU." Hence, a condition regarding monitoring for biological diversity and environmental quality that appears to have been fulfilled prior to March 2001, becomes a condition in May, 2003 as though little had been done by PLANTAR regarding this matter.

In summary, the lack of specific reports from the March 2001 public summary make it difficult to understand not only PLANTAR's operations, but progress or regress in their operations between the public summary of March 2001 and the recertification public summary of May 2003. As well, there appears to be contradictions between the earlier public summary where certification conditions appeared to have been met, but in the later public summary these conditions re-emerged. While such an occurrence is not outside the realm of possibility, this situation needs to be clearly explained in the public summary in order for there to be confidence in not only the original certification audit, but also the recertification audit.

***Specific Issue #2: Presence of high conservation value forest (HCVF).***

The recertification public summary report of May 2003 describes that PLANTAR's operations are found generally in a savanna (cerrado) biome. The public summary report goes on to explain that, while the savannas are the second biggest biome in the country, savannas have become threatened because of their use for fuel wood, charcoal, other wood products, and pasture for cattle. The summary report indicates that in the past 25 years nearly 40% of all savannas in Brazil have been used for pasture, timber harvesting, or intensive agriculture. The report goes on to explain that savannas are considered to be not only a regional biodiversity "hotpoint," but also of high importance for global biological diversity.

Given this explanation and understanding the aggressive nature of PLANTAR's eucalyptus plantation program, one would expect a strong condition regarding establishment of a network of ecological reserves to protect and restore savannas across PLANTAR's operating area and/or establishment of one or more high conservation value forests within PLANTAR's operating areas aimed at protecting and/or restoring savannas. Instead, condition 2002-02 requires only the development of scientific studies to describe flora and fauna characteristics in PLANTAR's operations, and development of an improved monitoring program. There seems to be an obvious contradiction here in the certification of PLANTAR between the high biological value of savannas, even if they require restoration, and the priority, or lack thereof, given to protecting and/or restoring savannas in PLANTAR's operations as expressed in the conditions attached to the recertification as expressed in the public summary report of May, 2003.

***Specific Issue #3: Location and adequacy of Permanent Protection Areas.***

The recertification public summary report of May, 2003 indicates that PLANTAR has mapped all of the Permanent Protection Areas (PPA) and is "performing the recuperation of those that are in disagreement with what is foreseen in the Forest Regulation." However, it is impossible to evaluate the ecological adequacy of PPAs and restoration efforts in these areas without seeing a map showing the location of the PPAs, a summary rationale for the location of the PPAs, a description of restoration treatments being carried out, and photographs showing the present condition of PPAs and restoration efforts. This is a specific example of an important environmental issue that relates to both *FSC Principle #6: Environmental Impact* and *FSC Principle #9: Maintenance of High Conservation Forests*.

***Specific Issue #4: Reduced water availability, drought, and eucalyptus plantations . . .***

Local people have complained that PLANTAR's eucalyptus plantations are responsible for general drying out of the areas where eucalyptus plantations are found. These assertions include a reduction in the water table, drying out of wetland areas, and less surface water. While the poor English makes it difficult to understand, the text of SCS's public summary report for the recertification evaluation of May, 2003 refutes these assertions of local people. However, there is no specific

evidence provided that gives the reader any confidence that the auditors had adequately addressed the concerns regarding water problems potentially associated with eucalyptus plantations. Instead, the certification audit appears to have relied upon anecdotal information like lower water availability being the result of normal droughts or El Niño. There are no attempts to critically investigate this important environmental impact which raises doubts as to the rigour with which not only this potential environmental impact has been considered in the certification audit and the recertification audit, but also the rigour with which all potential environmental impacts (FSC Principle #6) have been considered by the certification body.

Since SCS cites only anecdotal information to address concerns regarding water problems, one may easily postulate that eucalyptus plantations may contribute to water problems using an empirical or anecdotal approach. The natural savanna ecosystem types in this area were dominated by grasses that are very good “scavengers” of water in dry sandy soils. As well, the roots of grasses do not extend as deeply as trees and, therefore, grasses utilize surface moisture and do not generally impact aquifers or water tables found lower in the soil. This adaptation of grasses permits them to exist in the dry, coarse-textured soils that are characteristic of much of PLANTAR’s operations. However, one might postulate that, when these grass communities with scattered trees are replaced by a rapidly growing plantation of eucalyptus that not only has a deeper penetrating root system than the grass but also has a higher transpirational demand for water, that the eucalyptus plantations could deplete local water resources and water tables in a manner atypical of the natural vegetation conditions. This impact could result in a noticeable drying of the area.

While I accept that this scenario for eucalyptus plantations being associated with increased drought and lower water tables is hypothetical and anecdotal, it seems as plausible to me as the hypothetical and anecdotal explanation contained in the public summary report for the recertification evaluation.

This comparison between anecdotal analyses of water problems is made to cast light on the need for a more thorough analysis of the overall dry conditions and declining water tables in areas that are part of PLANTAR’s eucalyptus plantations. In my opinion, this issue needs to be handled with significantly more precaution than is currently demonstrated in the public summary report of May, 2003. In particular, it would appear prudent to require the following as conditions of a certification audit:

- significantly reduce the areas being converted to eucalyptus plantation, pending more conclusive analysis;
- accelerate the restoration of natural vegetation communities, with particular emphasis on developing a network of ecological reserves built around riparian ecosystems, headwaters areas, wetlands, and other features important for water conservation; and
- set in place an active adaptive management experiment to determine the causes for overall drying conditions in the areas of PLANTAR’s eucalyptus plantations.

#### ***Specific Issue #5 : PLANTAR and the Prototype Carbon Fund***

PLANTAR has applied to the World Bank Prototype Carbon Fund (PCF) to obtain subsidies from the clean development mechanism of the Kyoto Protocol for their eucalyptus plantations in Minas Gerais State, Brazil. On the surface this application for a financial subsidy may not appear to have a direct connection with the certification audit, but in reality I believe that the application to the World Bank for a PCF subsidy does have a bearing on the certification audit, and should have been more carefully considered in the audit for the following reasons:

- The World Bank requires that any PCF carbon sequestration project be certified by the Forest Stewardship Council. In the recertification audit, per the public summary report, the area gaining FSC certification increased significantly from the original certification in 1998. In addition, the current total area certified under the recertification evaluation (May, 2003 public summary report) is still only a small portion of PLANTAR's overall operating areas where they practice short-rotation even-aged silviculture in eucalyptus plantations. The certification audit is unclear as to whether the small area of FSC certified PLANTAR operations will continue to be increased through time through certification audits. While this is possible under FSC procedures, the public needs to know that there may be significant pressure brought to bear on a certifying body to conduct such certifications rapidly and progressively through time due to financial benefits that could be obtained by the company in the form of prototype carbon funds by increasing the area that is certified. Such a piecemeal approach, while potentially within the realm of acceptability by FSC, would not be likely to lead to either good ecological landscape management or to adequate benefits for local people. If this piecemeal approach to certification were followed by PLANTAR, chain of custody for newly added certified forests may be confused with uncertified forests. Overall one is left wondering whether good forest management will drive future PLANTAR certification requests, or the desire for financial subsidies to PLANTAR operations from the Prototype Carbon Fund.
- The primary basis for PLANTAR being eligible for receiving benefits from the clean development mechanism of the Prototype Carbon Fund is that charcoal produced from the cutting of eucalyptus will be used for pig iron smelting to replace the use of charcoal from the cutting of natural forests. In this way the PCF encourages the conservation of natural forests and/or the reduction in the use of non-renewable coal in the production of pig iron. Obviously this use of the charcoal from eucalyptus plantations in the smelting of pig iron to replace charcoal from the cutting of natural forests is the reason that PLANTAR's operations qualify for the PCF. However, Plantar now appears to be directing their charcoal production to the barbecue charcoal market. This change is documented in both the public summary reports of March, 2001 and May, 2003. This change is relevant because, by PLANTAR sending more of their charcoal into the barbecue charcoal market, there will be more pressure to cut natural forests for charcoal to produce pig iron. Hence, it appears that PLANTAR may be using the PCF to obtain financial assistance for their operations that ostensibly would reduce the cutting of natural forests and/or the use of coal in smelting iron while actually using a portion of the charcoal produced under certification for the PCF as barbecue charcoal.
- A letter of May 23, 2003 to the Prototype Carbon Fund of the World Bank signed by more than "50 respected Brazilian groups and citizens" questions the certification of PLANTAR in a variety of aspects including:
  - inadequate stakeholder consultation,
  - negative environmental impacts,
  - monies from the PCF being necessary for the economic viability of PLANTAR operations, thereby calling into question the overall economic viability of PLANTAR's eucalyptus plantations, and
  - water shortages associated with PLANTAR's operations.

While the date of this letter to the World Bank is during the same month (May, 2003) in which the public summary report of the recertification evaluation was issued, one would think that SCS auditors would have been aware of many of the more than 50 signatories to this letter, would have consulted with the signatories, or a substantial population of the signatories, in an appropriate manner, and would have thoroughly incorporated the results of these consultations into the public summaries. While the problems raised by the signatories to the May, 2003 letter are related to the Prototype Carbon Fund, they are also directly related to the certification of PLANTAR's operations. As such, many of the issues associated with the Prototype Carbon Fund are also issues that need to be addressed through the certification audit of PLANTAR.

## 5. RECOMMENDATIONS

In many respects the two public summary reports of Scientific Certification Systems' 1998 certification of PLANTAR (public summary (update) March, 2001), and their recertification of PLANTAR (public summary, May, 2003) raise as many questions as they answer:

- 1) Was a representative group of stakeholders consulted using appropriate techniques for obtaining and evaluating stakeholder information?
- 2) What are the actual working conditions for employees of PLANTAR in their eucalyptus plantations, with particular regard for human health associated with the application of pesticides and production of charcoal?
- 3) What are the cultural, social, and ecological impacts to local people and rural communities as a result of PLANTAR's eucalyptus plantations?
- 4) What are the reasons for the overall drying out and loss of available water in areas where PLANTAR's eucalyptus plantations are managed? Is this phenomenon management induced wholly? Or partially?
- 5) What are the overall environmental impacts of PLANTAR's plantations? Are these environmental impacts acceptable to local people and adequate to maintain or restore ecosystem functioning in the area of PLANTAR's eucalyptus plantations?
- 6) Is the existence of PLANTAR's eucalyptus plantations contributing to conservation and restoration of the threatened savanna (cerrado) biome?
- 7) Do the Permanent Protection Areas (PPAs) constitute an adequate ecological reserve network of an appropriate scale, characteristics, and spatial arrangement to maintain and, as necessary, restore landscape level ecosystem functioning in PLANTAR's operating areas?
- 8) Are provisions of the management plan and operating plans adequate to ensure the long-term ecological sustainability and economic viability of PLANTAR's operations?
- 9) What are the relationships between PLANTAR's status in the World Bank's clean development mechanism of the Prototype Carbon Fund and PLANTAR's FSC certification? Specifically, does PLANTAR intend to continue "adding area" to their certified operations to increase their subsidies under the Prototype Carbon Fund? How

will these intentions affect the short- and long-term social and environmental quality of PLANTAR's operations?

These and other questions require a more complete review by knowledgeable independent people with an arm's length relationship to both PLANTAR and Scientific Certification Systems. I recommend that such a review be undertaken and that this review be conducted under a terms of reference acceptable to local people and communities, particularly the employees of PLANTAR and local people directly affected by PLANTAR's operations

As a part of this independent review, I recommend that the details of PLANTAR's operations which are not determined by an independent body to be proprietary, be made public in readily available, understandable form to local people and others interested in better understanding PLANTAR's operations. These materials would include, but not be limited to:

- PLANTAR's management and operating plans, including all supporting documentation,
- the rationale and maps for PLANTAR's Permanent Protection Areas (PPAs),
- evaluations of working conditions,
- evaluations of economic viability, and
- monitoring protocols and monitoring results.

Finally, I recommend that an overall landscape level plan be developed for all of PLANTAR's operations, and that the totality of the operations be the basis for a Forest Stewardship Council certification audit. In this way, there will be a clear commitment of PLANTAR to high standards of forest management throughout their operations, avoiding the current appearance of a "certification of convenience" to obtain prototype carbon funds. Such a plan is also the only way to ensure the application of consistently high standards for employees across PLANTAR's operations, ecological sustainability, including the conservation and restoration of the savanna biome, and the long-term economic viability of PLANTAR'S operations.

If there are any questions about the contents of this initial review, please contact the undersigned using the information provided in the letterhead.

Sincerely,

A handwritten signature in black ink, appearing to read 'Herb Hammond', written in a cursive style.

Herb Hammond, RPF and Forest Ecologist