Independent Forest Monitoring Pilot Project
Nicaragua

Mission Report No. 002

Mission of the Independent Monitor

---------------------------
Cordillera de Dipilto y Jalapa Nature Reserve
Annual Operational Plan in a Private Pine Forest

<table>
<thead>
<tr>
<th>Name of the Area:</th>
<th>El Palmar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Operational Plan 2005-2006:</td>
<td>Authorisation no. 1310 P381-079</td>
</tr>
<tr>
<td>Forest Management General Plan:</td>
<td>Authorisation no. 1310 P381</td>
</tr>
<tr>
<td>Owner:</td>
<td>Luis Alberto Ortez</td>
</tr>
<tr>
<td>Sub-contractor:</td>
<td>Juan José García</td>
</tr>
<tr>
<td>Municipality:</td>
<td>San Fernando, Nueva Segovia</td>
</tr>
</tbody>
</table>

Mission dates: 07 and 09 August 2006
Report date: 24 August 2006
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1. EXECUTIVE SUMMARY

Within the framework of the Agreement signed between INAFOR\(^1\) and Global Witness for the implementation of an Independent Forest Monitoring Pilot Project in Nicaragua, the Global Witness technical team (known as the independent monitor), along with two Forest Regents, carried out a mission on 07 and 09 August to the Forest Management General Plan (FMGP) of the pine forest area known as El Palmar, no. 1310 P381, including the supervision of the compartments of the Annual Operational Plan (AOP) 2005-2006, no. 1310 P381-079, of the sites of Achuapa and El Arrayán. This FMGP is located in the Municipality of San Fernando, Department of Nueva Segovia. It is owned by Mr. Luis Alberto Ortez Ortez, but it has been subcontracted to Mr. Juan García.

In order to carry out this mission, support was provided from INAFOR headquarters, as well as from the Delegation of the District of Nueva Segovia, the Municipal Delegation of San Fernando and the Forest Regents responsible for El Palmar FMGP, Róger Moreno and Milton García.

The conclusions and recommendations from the independent monitor about this mission are:

1. During the harvesting activities within the compartments, some technical regulations have not been followed. These relate to:
   - delimitation and marking of the annual harvesting area and its compartments
   - forest road tracks
   - logponds
   - log extraction
   - harvesting of trees in steep slopes
   - managing of the residuals of the harvested trees
   - marking of seedlings

2. 13 trees were illegally harvested within the protection area of a water stream in compartments 16 and 17 of El Arrayán.

3. 31 trees were illegally harvested outside compartment 16 of El Arrayán and compartment 17 of Achuapa, thus beyond the limits of the El Palmar FMGP.

4. In total, 44 trees were illegally harvested, with a total estimated volume of 18.9 m\(^3\)sc\(^2\).  

\(^1\) Forest National Institute (Instituto Nacional Forestal).  
\(^2\) Solid cubic metres including bark (metros cúbicos sólidos con corteza).
5. The procedure followed by INAFOR to approve the 2005-2006 AOP did not comply with what is established in the Technical Norms for the Sustainable Management of Broadleaf and Pine Forests (NTON\textsuperscript{3}, July 2004) and in the Administrative Procedures for the Sustainable Management of Tropical Broadleaf Forests, Pine Forests and Forest Plantations (No. 35 – 2004) in force in the country.

6. INAFOR has not carried out the due and compulsory supervision and inspection during the implementation of the 2005-2006 AOP of the El Palmar FMGP.

Based on these conclusions, the independent monitor recommends:

1. INAFOR should immediately visit the FMGP area and verify the breach of the Technical Norms and Administrative Procedures in the implementation of the 2005-2006 AOP, as well as issue the relevant corrective measures.

2. INAFOR should initiate the appropriate administrative process regarding the breach of the Law No. 462, the NTON and the Administrative Procedures during the implementation of AOP 2005-2006.

3. INAFOR should make the relevant authorities (Environmental Public Prosecutor, State Attorney for the Environment, MARENA\textsuperscript{4}) aware of all the damages caused in the implementation of the harvesting activities of this FMGP.

2. COMPOSITION OF THE MISSION

First day: 07 August 2006

- Róger Moreno, Forest Regent
- Milton García, Forest Regent
- César Zelaya, IFM technical staff from Global Witness
- Arturo Avila, IFM technical staff from Global Witness

Second day: 09 August 2006

- Róger Moreno, Forest Regent
- César Zelaya, IFM technical staff from Global Witness
- Arturo Avila, IFM technical staff from Global Witness
- Filippo Del Gatto, part-time consultant for Global Witness

\textsuperscript{3} Nicaraguan Obligatory Technical Norms (Normas Técnicas Obligatorias Nicaragüenses).
\textsuperscript{4} Ministry of the Environment and Natural Resources (Ministerio del Ambiente y Recursos Naturales).
3. POSITIVE ASPECTS

In order to carry out this mission, support was provided by INAFOR staff and Forest Regents, whose contribution made the mission possible in terms of:

- The provision by INAFOR (Directorate of the Forest Register, Directorate of Control and Territorial Operations, Delegation of the District of Nueva Segovia, Municipal Delegation of San Fernando) of the documentation and information related to the El Palmar FMGP.

- The escort and assistance of the Forest Regents Róger Moreno and Milton García, responsible for the FMGP, during the field mission in the area.

4. CONSTRAINTS

Despite the positive aspects mentioned above, it is worth noting that some technical and documentation constraints were faced, amongst which are:

- Lack of delimitation and marking of the perimeter of the FMGP and its compartments.
- Two management plans were approved as one: Achuapa and El Arrayán = El Palmar FMGP (see map 1).
- Out-of-date information of the state of the forest area to be managed.
- The maps shown in the documents were produced using a compass and measuring tape, without locating the geographic coordinates appropriately.
- The road track network is not accurately reflected in the maps.

5. DESCRIPTION OF THE FIELD WORK

As mentioned above, the mission was implemented over two days, during which the following activities were carried out:

**Day 1:**
- Corroboration of the south limit of the El Arrayán FMGP, where UTM coordinates were taken using GPS units.
- Inspection and geographic location of two logponds in compartments 5 and 16 at El Arrayán.
- Inspection of the water stream protection area in compartment 16 at El Arrayán.
Day 2:
- Inspection of the protection area within compartments 16 and 17 at El Arrayán.
- Inventory of stumps of the trees harvested within the protection area mentioned above.
- Inspection of the north limit of compartment 17.
- Inspection of the protection area of compartments 17 and 18 at Achuapa.
- Inventory of stumps harvested outside compartment 17 at Achuapa and beyond the boundaries of the FMGP.
- Inspection of the limits of compartment 16 at El Arrayán.
- Inventory of stumps of the trees harvested outside compartment 16 and beyond the limits of the FMGP.

During these inspections notes were taken about the condition of the forest road tracks and the harvesting of trees in steep slopes.

6. RESULTS OF THE MISSION

6.1 General description of the FMGP visited

El Palmar FMGP comprises two areas of pine forests known as Achuapa and El Arrayán. This FMGP was approved in July 1993 by the relevant MARENA authorities. Such approval only included Achuapa, and in August 1998 El Arrayán was included to the plan. On 01 November 2000, the General Directorate of Protected Areas of MARENA issued a new authorisation of El Palmar FMGP, where it is stated that the area falls within the ‘Cordillera de Dipilto y Jalapa’ Natural Reserve.

In February 2000, INAFOR issued forest authorisation no. 1310 P381, whereby it approved the El Palmar FMGP, owned by Mr. Luis Alberto Ortez Ortez, and located in the Municipality of San Fernando, Department of Nueva Segovia. This authorises sustainable management operations in Achuapa for the period covering 2000-2009.

On 18 November 2005, INAFOR, through its Municipal Delegation of San Fernando, issued forest authorisation no. 1310 P381-079, by which the AOP El Palmar is approved after having complied with the technical, legal and administrative requisites. With this, its owner, Luis Alberto Ortez, was authorised to carry out sustainable forest management at El Arrayán during the 2005-2006 period.

The management plan has a total area of 383.3 ha and is divided into 40 compartments, of which 36 are production forests and 4 are protection forests. The logging cycle was estimated at 10 years, with three logging periods: 1998-2000, 2001-2003 and 2004-2007. The area is therefore in its last logging period.
Compartments approved in the 2005-2006 AOP are nos. 15, 17 and 18 at Achuapa, and nos. 16, 17 and 18 at El Arrayán. In total, they cover an area of 54.5 ha, of which 51.3 are production forests and 3 are protection forests. The activity to be carried out is commercial selective thinning, and the planned volume to be extracted is 1333 m³sc, with a total of 3003 trees to be harvested.

Annexes 1, 2, 3 and 4 present the documents related to the approval of this FMGP.

6.2 Main findings

6.2.1 Approval of the 2005-2006 AOP

The approval of the AOP with registration no. 1310 P381-079 is based on a technical inspection that took place on 04 November 2005 and was carried out by a technical staff member from INAFOR’s Delegation of the North District of Las Segovias. Its objective was to ‘verify the dasometric data of El Palmar AOP’. The results of this verification show that ‘a random sampling was carried out in compartments 15, 17, 18, 16’, 17’ and 18’. The compartments coincide 85% with the data recorded in the field spreadsheet. The recommendations are to ‘pile up the residuals, maintain the surveillance in the area and build fire-break trails and ditches’.

This AOP complies with the requirements of Art. 47 of the Regulations of Law 462. However, as it can be seen from the results of the technical field inspection, only the dasometric data of the compartments were taken into account, and some NTON norms were not observed. These relate to those norms included in the Guide to Evaluate Annual Operational Plans in Pine Forests, issued by INAFOR’s Directorate of Control and Territorial Operations in August 2004.

6.2.2 Approval of the 2005-2006 AOP vs. Harvesting Permit

The 2005-2006 AOP was approved on 18 November 2005, while harvesting permit no. 1310 P381-079 was issued on 09 November 2005. Therefore, the harvesting permit was approved prior to the AOP, which was approved 9 days later. This approval breaches the procedure established in Art. 47 of the Regulations of Law No. 462, where it is made clear that in order to obtain a harvesting permit, the relevant FMGP and AOP must be presented in advance.

5 Law for the Conservation, Promotion and Sustainable Development of the Forest Sector (Ley de Conservación, Fomento y Desarrollo Sostenible del Sector Forestal).
6.2.3 Commercial volume requested at 2005-2006 AOP vs. authorised volume

The volumetric data established for the commercial harvest in the application for the AOP (Form 049) – dated 02 November 2005 and presented to INAFOR by the Forest Regent Róger Moreno – do not coincide with the data approved in the harvesting permit (No. 06143) issued by INAFOR, dated 09 November 2005, where a volume of 1500 m³scc and 3455 trees is approved (see annex 3). Table 1 shows the original volumetric data in the request for the approval of the AOP.

Table 1. Summary of the volumetric data presented in the request for the approval of the AOP.

<table>
<thead>
<tr>
<th>Area (ha)</th>
<th>Trees to harvest</th>
<th>Commercial volume (m³scc)¹</th>
<th>Remaining standing trees</th>
<th>Remaining standing volume (m³scc)</th>
<th>Total volume (m³scc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.30</td>
<td>3003</td>
<td>1333</td>
<td>9139</td>
<td>3332</td>
<td>4665</td>
</tr>
</tbody>
</table>

¹ Cubic metres including bark.

The inconsistency lies in that the volumetric data presented for the approval of the AOP showed a much lower volume than those presented in the harvesting plan of the same AOP which was approved by INAFOR. Table 2 summarises the data of the AOP.

Table 2. Summary of the volumetric data of the 2005-2006 AOP, El Palmar FMGP.

<table>
<thead>
<tr>
<th>Compartments to harvest</th>
<th>Type of harvesting activity</th>
<th>Total AOP area (ha)</th>
<th>Total trees to harvest</th>
<th>Commercial volume (m³scc)</th>
<th>Remaining standing trees</th>
<th>Remaining standing volume (m³scc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,17,18,16’,17’,18’</td>
<td>Commercial selective thinning</td>
<td>51.30</td>
<td>3455</td>
<td>1499.8</td>
<td>6351</td>
<td>3165</td>
</tr>
</tbody>
</table>

The difference between the commercial volume and the number of trees to harvest requested for the approval of the AOP and the actual volume approved by INAFOR is 167 m³scc and 452 trees respectively. This difference negatively affects the number of trees and volume that should remain standing within the compartments approved in this AOP.

6.2.4 Forest road tracks and logponds

During the inspections to the logging compartments of this AOP, it was noted that the forest road tracks, which comprise primary, secondary and tertiary tracks (old and reactivated ones), is not entirely reflected in the map of the FMGP. Similarly, the location of the logponds is not shown, which indicates that the latter were done without INAFOR’s authorisation, and breaching the norms⁶ that establish that all the logponds and road tracks must be clearly reflected in the FMGP map.

⁶ NTON 4.13.1
The information about the area showed in the field data spreadsheet of the AOP (see Annex 5) indicates that the managed compartments present slopes that range from 40 to 55%, and the soil has a sandy texture. According to what the NTON\textsuperscript{7} establish, ‘if the predominant slope is over 20%, the construction of road tracks must be done by engineering and/or soil conservation works’. It is also stated in the Technical Specifications for the Construction of Forest Road Tracks that ‘the forest road tracks that cross water sources must feature draining structures, such as gutters, sewages, surfacing and bridges’.\textsuperscript{8} The construction of road tracks within the FMGP breaches all these regulations because:

\begin{itemize}
  \item there is no surfacing applied
  \item the slope is over 20% in most of the area
  \item there are no draining works constructed
  \item road tracks have been reactivated without carrying out works to appropriately preserve the soil
\end{itemize}

These facts represent a potential risk of erosion and landslide in various points of the logging compartments, which could lead to the sedimentation in water streams and the destruction of the natural regeneration. The following pictures show the lack of engineering works in the forest road tracks within Achuapa.

\begin{itemize}
  \item Picture 1
  \item Picture 2
\end{itemize}

\textsuperscript{7} NTON 4.1.4.1
\textsuperscript{8} NTON 4.1.4.5
6.2.5 Harvesting

According to NTON\textsuperscript{9}, the mechanical harvesting in areas with slopes steeper than 35\% is not permitted. Similarly, it is forbidden to carry out any logging in slopes steeper than 75\%. As mentioned above, the logging compartments have an average slope of 51\%, and it is therefore obvious that these norms have been breached. As the following pictures show, mechanical harvesting is going on in areas of very steep slopes.

![Picture 3](image1.png) ![Picture 4](image2.png)

- Preparation activities

According to the 2005-2006 AOP, the preparation activities were not carried out as prescribed, as the annual logging area was not clearly limited and marked, and the same is true for the compartment to be harvested\textsuperscript{10}. Similarly, it was noted that the marking of trees was incomplete. Despite the fact that all the trees that must not be logged should be marked, it was noted that in the compartments already harvested a great amount of trees were not marked. It is important to note that the NTON do not specify the type of mark or colour of the paint to be used for the trees that are to remain standing.

This lack of marking can lead to the harvesting of trees in protection areas, beyond the authorised compartments and, worst of all, beyond the limits of the FMGP.

- Harvesting activities

The extraction of logs is carried out with trucks that have a wincher and steel cables. It is however obvious that the height of the dragging device is not sufficient, as in the secondary and tertiary roads there are pits clearly caused by logs. In the rainy season, these could lead to soil erosion and holes, which forces

\textsuperscript{9} NTON 4.1.6.1
\textsuperscript{10} NTON 6.4.2.1
constant rebuilding of the road tracks and all its related movement of great volumes of sand and their negative impact

- **Post-harvesting activities**

Within the harvesting compartments, the clearing of residuals has not been carried out immediately after finishing the logging activities. These residuals are therefore spread around the harvested area. It is currently the rainy season, so the likelihood of fires is less, but residuals could turn into highly inflammable materials during the dry season.

The following pictures show the residuals and the lack of appropriate management.

![Picture 5](image)

![Picture 6](image)

**6.2.6 Mitigation measures**

Mitigation measures presented in the AOP are not being observed rigorously according to what was noted in the compartments being harvested. Regarding the extraction of logs, this activity was not limited to slopes lower than 35%, and there were no conservation measures for the sandy soils predominant in this area. As mentioned above, the residuals are not being properly treated.

Regarding the building of conservation measures on the road tracks and their closure, this is not an activity that is implemented right after the extraction of the trees harvested, according to the Forest Regent responsible for the FMGP. Rather, these will not be closed until the harvesting and extraction activities have been completed in all the logging compartments, despite the potential risk of damages that may result from the exposure of the roads to erosion.
6.2.7 Seedling trees

In the logging compartments where commercial selective thinning has been carried out, the location of the seedling trees is not clear, as the regulation\(^\text{11}\) establishing the need to mark these trees with a yellow circle has not been followed.

6.2.8 Trees logged in protection areas or beyond the limits of the FMGP

As mentioned at the beginning of this report, this FMGP comprises two areas: Achuapa and El Arrayán. The 2005-2006 AOP comprises the harvesting of six compartments (16, 17 and 18 at El Arrayán, and 15, 17 and 18 at Achuapa).

During the inspection of these six compartments, it was noted that trees had been logged in the protection area of compartments 16 and 17, as well as outside compartment 16 at El Arrayán and compartment 17 at Achuapa.

The forest protection areas within this FMGP are established at 50 metres horizontally measured at both sides of the water streams or water sources. Logging in these areas is forbidden by Art. 27 of Law 462. Similarly, it is forbidden and therefore illegal to log trees beyond the boundaries of the FMGP or outside the logging compartments approved in a AOP, as has happened in compartment 16 at El Arrayán and 17 at Achuapa.

The following table 3 shows the data of the inventory of stumps of the 44 trees logged in the protection areas and beyond the boundaries of the FMGP. It includes the number of stump, the diameter in centimetres and the UTM coordinates for each stump.

Table 3. Stumps inventory of illegally-logged trees

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Stump diameter (cm)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>2</td>
<td>55</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>4.3.4.1</td>
</tr>
<tr>
<td>5</td>
<td>56.5</td>
</tr>
<tr>
<td>6</td>
<td>46</td>
</tr>
</tbody>
</table>

\(^{11}\) 4.3.4.1
Because the mono-cyclic system is considered appropriate for the management of pine forests\(^\text{12}\), the volume of a compartment or stand is considered more significant than the volume of the individual trees (the opposite applies to broadleaf forests). For this reason, in the case of illegally-logged trees, INAFOR does not apply any formula using the number of stumps to calculate the logged volume. Therefore, in order to calculate the volume of the logged trees, the number of trees was multiplied by the average volume\(^\text{13}\) of each of them, which gives a total of 18.9 cubic metres of timber (see annex 6).

\(^{12}\) NTON 6.1.1

\(^{13}\) Data provided in the harvesting permit issued by INAFOR.
Formula to make the calculation:

Harvested trees \times \text{average volume per tree (m}^3) = \text{total volume}

\[
44 \times 0.43 \text{ m}^3 = 18.9 \text{ m}^3
\]

The following image presents a map partially showing the limits of the FMGP and the geographic location of the stumps. It is obvious from the map that these are located within protection areas of beyond the boundaries of the FMGP.

Map 1. Arboles aprovechados en áreas de protección y fuera de límites del PGMF El Palmar

6.2.9 Supervision and inspection of INAFOR to the FMGP

According to Law No. 462, its Regulations and the Administrative Dispositions for the Sustainable Management of Tropical Broadleaf Forests, Pine Forests and Forest Plantations, it is compulsory for INAFOR delegates to carry out random inspections in the forest areas that are included in a FMGP, with the aim to verify the compliance with the administrative requirements and the NTON of the approved harvesting permits.
According to the Forest Regent responsible for El Palmar FMGP, the INAFOR authorities have not carried out any inspection during the 2005-2006 period that corresponds to the approved AOP. This is due to the weak institutional presence at the Municipality of San Fernando, which only has one Municipal Delegate to supervise more than 20 management plans approved in the Municipality.

However, this lack of supervision and surveillance cannot be justified, since, had an efficient technical inspection been carried out prior to the approval of the AOP, the breach of the NTON and Administrative Procedures in this FMGP could have been prevented.

7. CONCLUSIONS AND RECOMMENDATIONS

After studying the information of the FMGP and AOP and gathering evidence in the field, the independent monitor offers the following conclusions:

1. During the harvesting activities within the compartments, some technical regulations have not been followed. These relate to:
   - delimitation and marking of the annual harvesting area and its compartments
   - forest road tracks
   - logponds
   - log extraction
   - harvesting of trees in steep slopes
   - managing of the residuals of the harvested trees
   - marking of seedlings

2. 13 trees were illegally harvested within the protection area of a water stream in the compartments 16 and 17 of El Arrayán.

3. 31 trees were illegally harvested outside compartments 16 of El Arrayán and compartment 17 of Achuapa, thus beyond the limits of the El Palmar FMGP.

4. In total, 44 trees were illegally harvested, with a total estimated volume of 18.9 m³scc.

6. INAFOR has not carried out the due and compulsory supervision and inspection during the implementation of the 2005-2006 AOP of the El Palmar FMGP.

Based on these conclusions, the independent monitor recommends:

1. INAFOR should immediately visit the FMGP area and verify the breach of the Technical Norms and Administrative Procedures in the implementation of the 2005-2006 AOP, as well as issue the relevant corrective measures.

2. INAFOR should initiate the appropriate administrative process regarding the breach of the Law No. 462, the NTON and the Administrative Procedures during the implementation of AOP 2005-2006.

3. INAFOR should make the relevant authorities (Environmental Public Prosecutor, State Attorney for the Environment, MARENA) aware of all the damages caused in the implementation of the harvesting activities of this FMGP.
8. Annexes

Annex 1: Authorisation FMGP - MARENA

AUTORIZACIÓN
DE PLAN DE MANEJO FORESTAL EN
LA RESERVA NATURAL CORDILLERA DE DIPILTO Y
JALAPA

Cumplidos los Requisitos establecidos para este propósito la Dirección General de Áreas Protegidas, por este medio Autoriza la ejecución del Plan General de Manejo Forestal "El Palmar" dentro de la Reserva Natural Cordillera de Dipilto y Jalapa.

Esta autorización está sujeta al cumplimiento de las siguientes condiciones:

1. Aplicar los acuerdos y compromisos contenidos en la carta del 08 de septiembre de 2000 enviada por la Dirección General de Áreas Protegidas a la Asociación de Empresarios Forestales de Nueva Segovia (ASEMFOR) y a las Asociaciones de Dueños de Bosques (ADEPROFOCA - CECOFOR y APROFOC)

2. Poner en práctica las normas técnicas para Bosque de Pinares en el Sistema Nacional de Áreas Protegidas (SINAP) presentada aprobada y aceptada para las Asociaciones Forestales en la Ciudad de Ocotlán el 25 de octubre de 2000.

3. Para el cumplimiento de las condiciones anteriores, la Delegación de MARENA en Nueva Segovia en coordinación con la Dirección General de Áreas Protegidas y el INAFOR darán seguimiento a este Plan General de Manejo Forestal.

Dado en la ciudad de Managua a los 01 días del mes de Noviembre del año dos mil.

Atentamente,
Mauricio Fournier Nuñez
Director General Áreas Protegidas

S.Centro 08 FEB 2001

[Signature]
Annex 2: Authorisation FMGP - INAFOR
Annex 3: Harvesting permit - INAFOR

<table>
<thead>
<tr>
<th>Código</th>
<th>Nombre Científico</th>
<th>Nombre común</th>
<th>Total árboles</th>
<th>Volumen (m³)</th>
<th>Volumen por árbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Po2</td>
<td>Pino de como</td>
<td>Pino</td>
<td>2453</td>
<td>1500</td>
<td>0.424</td>
</tr>
</tbody>
</table>

Total Aprobado: 3453, 1500, 0.43

Esta autorización es válida hasta: 09-11-2006

Para transportar la madera deberá hacerse con la guía de transporte de madera en rollo

Dado en la ciudad de San Fernando a los 9 días del mes de Noviembre del 2005

Observaciones: 50 Aprovechados: 102 comp. 15,17 / 18, 16, (17)² / 18, 19

El Instituto Nacional Forestal, agrupa el Plan Operativo Anual (POA), Conferencias El Palmar, por haber cumplido con los requisitos técnicos, legales y administrativos que para tal efecto se requieren.

Dado en el Municipio de San Fernando a los 18 días del Mes de Noviembre del 2005.
Annex 5: Field notes spreadsheet format AOP 2005-2006
### Annex 6: Annual harvesting plan AOP 2005-2006

<table>
<thead>
<tr>
<th>No.</th>
<th>Acre</th>
<th>COH</th>
<th>COU</th>
<th>Total</th>
<th>Area</th>
<th>Vol.</th>
<th>Ratio</th>
<th>Area</th>
<th>COH</th>
<th>COU</th>
<th>Total</th>
<th>Area</th>
<th>Vol.</th>
<th>Ratio</th>
<th>Area</th>
<th>COH</th>
<th>COU</th>
<th>Total</th>
<th>Area</th>
<th>Vol.</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>14</td>
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