TAKING ROOT ENRACINE

Social reforestation & Carbon offsets

Plan Vivo Annual Report

Limay Community Carbon Project

2010-2011

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1. Project summary

The following Annual Report to the Plan Vivo Foundation reports upon the progress of Taking Root's Limay Community Carbon Project for the 2010-2011 planting year.

Summary

Table 1: Project summary

Reporting period		1 October 2010 - 30 September 2011	
Technical specifications in use		Mixed Species Plantation and Boundary Planting	
Area under management	155.3 ha equivalent*	**Areas put under management since last report**	113.7 ha equivalent*
Total smallholders with *plan vivos* and PES agreements (all vintages)	81	**New smallholders with PES agreements (2011 vintage)**	59
		2010 farmers who added new land (2011 vintage)	9
Total payments made to community fund (all vintages)			
Plan Vivo Certificates issued to date (2010 vintage)		12,342	
Submission for Certificate Issuance for new areas under management (2011 vintage)		33,684 tCO_2	

**Boundary Planting is measured in kilometers, but the equivalent hectares have been calculated based on the tCO_2e sequestered in Mixed Species Plantation. See Appendix 1 for more details.*

Please note that some pricing information has been removed by the Plan Vivo Foundation for client confidentiality.

2. Key Events, Developments and Challenges

Key events

Caoba College project

Cégep André-Laurendeau internship visit: From 30 May - 15 June, eight students and two professors from Cégep André-Laurendeau, a college located in Montreal, Canada, completed an internship in Limay, Nicaragua. Hosted by participants of the Limay Community Carbon Project, the interns helped these families plant trees on their land and educated students at La Parcila primary school about the importance of trees in creating and maintaining a healthy environment.

Above: A cégep professor and Nicaraguan primary school students pose under a tree in the schoolyard before going to plant seedlings. Photo courtesy of Cégep André-Laurendeau

This was the first time such an internship occurred in partnership with Taking Root. Deemed a success by both the students and the community alike, the internship programme will bring another group of students to Nicaragua in 2012.

Read the review: www.takingroot.org/2011/09/cegep-environmental-internship-in-nicaragua-a-success

Key developments

Operations developments

Scaling up: Due to great demand, the area planted in 2011 was more than double the area planted in 2010. This was supported in great part by the subsequent developments.

New technical specification: This year, the project created and implemented the Boundary Planting technical specification in which trees are planted along property lines or around fields and pastures to serve as living fences or natural barriers. Although employing this technique requires traveling over a much greater distance than the Mixed Species Plantations, the producers embraced the specification since it compliments their other agricultural and pastoral projects.

New permanent sample plot system: Previously, the monitoring of technical specifications was performed using temporary sample plots. This year, the methodology was improved through the establishment of a vast network of permanent sample plots (PSP) and the development of a continuous forestry inventory design system. This system is part of a long-term research project that combines geographical information systems and forest biometrics. In addition to monitoring the success of the growth and management milestones for each producer, the PSPs will be used to

collect tree- and plot-specific data for scientific research and development purposes. This new system will allow Taking Root to better understand species interaction through mixed plantings as well as the effects of site quality on productivity.

Species-specific biomass equations: Taking Root began working with the University of British Columbia (Canada) to develop species-specific biomass and taper equations for a selection of the species used in the project. The objective is to improve growth, yield and merchantable product projections. So far this initial process has proven successful and the team will continue to analyze the data.

Above: Co-Executive Director and Co-founder, Kahlil Baker, works with Elvín Castellón, Operations Officer, to take biomass measurements of specific tree species.

New human resources: In Nicaragua, a new technician, Deybing Lanuza Ariel Hernandez, was hired to help with such tasks as recruitment, planting logistics and training.

A new full-time monitoring technician, Randolf Castellón, was also hired for the monitoring and management of the PSP mentioned above.

Producer-technician working structure: To help identify issues and strengthen relationships between producers and technicians, each technician is now responsible for communicating with a specific set of producers. This gives each producer just one point of contact and minimizes communication errors within the team.

Fuel-efficient cookstoves: In 2011, community technicians purchased supplies to build over ten (10) new cookstoves within participating communities, which will help cut down on the demand for fuelwood, reduce the carcinogenic smoke released in the homes, and increase farmers' confidence and interest in the project.

Technological advances

The following technological improvements were put into place to help improve the workflow and build capacity within the team in Nicaragua:

Office improvements: A new office was set up in Limay with wireless Internet and new laptops equipped with tools such as Skype, file-sharing software and a remote access program. The Nicaraguan team received training on the new system and now has the capacity to communicate and transfer information more efficiently with the Canadian team. Likewise, any issues with the computers can be fixed remotely, if required. This bridges the gap that would otherwise be present because of the distance between the two offices.

GPS technology: Advanced GPS devices were purchased for the team in Nicaragua to allow for the automated measurement of areas of land. This leads to more efficient and less error-prone work.

KML geospace files: Taking Root's Technical Officer, David Baumann, has developed a set of KML (Keyhole Markup Language) geospatial files, which allows us to express geographic annotation and visualization on Internet-based, two-dimensional maps and three-dimensional Earth browsers, such as Google Maps and Google Earth, respectively. These maps can be shared with partners and clients abroad, further illustrating the scope and shape of the project.

To see a Google Map version, visit: www.co2r.com/content/map.html

Organizational developments

Human resources: In Canada, a full-time Communications Coordinator was hired to help with Canadian and international communications and promotion. Brooke van Mossel-Forrester is a co-founder of Taking Root and was able to join the team full-time through the support of a wage subsidy provided by the Quebec government.

Organization identity: The first major project undertaken by the Communications Coordinator was to develop a new brand identity for Taking Root. Launched in May 2011, this new identity better reflects the organizations growth and place as an innovative leader in the reforestation industry and carbon market.

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Canadian office: In response to the growth in Canadian staff, the Montreal headquarters moved to a larger location in July 2011.

Project promotion

Promotional videos: Taking Root created a new promotional video for use by its clients, available in English and French. Wholesale clients have been able to re-appropriate the video and can share it with their clients abroad. Visit: www.youtube.com/user/takingrootproject

CO_2 Responsible promotional kit: Taking Root has developed the CO_2 Responsible promotional kit for businesses that offset their services or products through the Limay Community Carbon Project. The kit includes a personalized microsite, stickers and shelf talkers, and the use of the CO_2 Responsible emblem on their communications material. The kit helps participating businesses raise awareness among their clients and competitors about the importance of managing and offsetting their carbon footprints. Visit the site: www.co2r.com

Produit CO_2 responsable
CO_2 responsible product

Key challenges

Quantity of seedlings

Data requirements: There was some difficulty collecting and processing data prior to starting the 2011 nurseries. This meant that certain information was not available on time, such as the size of some of the parcels to be planted, the total number of nurseries required and the total number of seeds needed. This was due in part to errors in data transfer and the need for more time to collect the data.

Seeds collected: As a result of the delayed data processing, the team was not able to gather enough seeds for certain tree species. This delayed the nurseries and resulted in a shortage of those species of seedlings when it was time to plant. For this reason, there were fewer trees planted than originally planned including a few areas that were not planted at all.

Lesson learned: Consequently, Taking Root has improved its planning process and has started collecting and processing information much earlier for the 2012 planting season. We will also seed 1.5 times the number of trees needed, whereas we seeded 1.2 times in 2011.

Land measurements

Area estimates: In 2011, the community technicians recognized that the estimated size of land given to them by farmers did not match the areas calculated using corresponding GPS coordinates. Most often, farmers overestimated their areas, leaving the project with less area to plant than planned.

Lesson learned: Technicians now only use GPS to calculate the farmers' areas. With the GPSs, the calculations are done immediately in the devices and no transcribing or estimations are required.

Project scale

Demand for carbon offsets: Taking Root is pleased that the demand for its carbon offsets is growing immensely and sales are very successful. However, the resulting challenge is that it is difficult to meet the demand on the ground, since it requires enlarging the planting area significantly. For this reason, Taking Root has had to turn down buyers.

Lesson learned: To meet this growing demand, Taking Root will expand the scope of its project significantly in the coming year. With improved technology and methodologies, and a more experienced staff, this projected growth will be very feasible.

Future developments

Future operations developments

Scaling up: As in this past year, the team will continue to increase the project size in the coming year within the existing project boundary as much as possible.

Increasing project boundary: In order to include new areas and meet rising demand, in 2012 Taking Root will begin the process of expanding the project boundary. A Remote Sensing Specialist from the University of British Columbia will help acquire and analyze a series of infrared satellite images to help us find priority areas as well as do the baseline calculations for this larger area.

Project Design Document: The Project Design Document (PDD) has been updated for the 2012 planting season to include Taking Root's strategy for surplus payments to the community fund. Currently, Taking Root signs agreements with producers before all offset sales contracts have been finalized. This means that the actual average price per offset and the contractual price agreed upon with the producers do not always match.

Subsequently, in the coming year Taking Root will establish a price paid to producers based on the previous year's average and the upcoming year's forecasted sales. Any surplus earned by the end of the year will be used to cover costs for community-related projects, including but not limited to nursery costs and the subsidization of fuel-efficient cookstoves. Such expenditures will be made in consultation with the communities and will be reported in the Plan Vivo Annual Report each year.

Fuel-efficient stoves: In the coming months, technicians will use the recently purchased material to build over ten (10) fuel-efficient cookstoves in participating communities.

Future technological improvements

Tablets: This coming year, the technicians will be provided with pre-programmed tablet computers that have built-in GPS functionality and cameras. This means that much of their work, including monitoring, is digitized. There will be no need to transcribe information, as it will transfer easily from tablet to computer. Also as a result, monitoring results will feed directly into the biomass equations that Taking Root is developing.

Future sales developments

New partners: Taking Root has already solidified agreements with new partners for distribution opportunities around the world. The coming year brings on three (3) new wholesale partners, including COTAP (United States), Global Carbon Exchange and Green Leaf (both United Kingdom).

3. Activities, total project size and participation

Current land-use activities

Approved technical specifications

Mixed Species Plantation: Land-use activities for 2011 vintage focused mainly on the Mixed Species Plantation. This technical specification involves planting and intensively managing multi-purposed mixed species forest plantations on participating farmers' land. All of the species selected are native to the region and are chosen in consultation with local producer groups and professional foresters.

For full details, view: www.planvivo.org/wp-content/uploads/Limay_mixed-forest_Plan-Vivo_TS_FINAL_March2011.pdf

Above: Producers and helpers work to plant seedlings on a producer's lot.

Boundary Planting: This technical specification was introduced in 2011 as a pilot project. Otherwise known as living fences, boundary planting is a way of introducing a variety of tree species along a property line in order to replace fencing over time, as opposed to building and maintaining fences made of timber. While sequestering carbon dioxide, this system helps diversify income, build long-lasting fences, and produce highly prized sawnwood in the long run.

For full details, view: www.planvivo.org/wp-content/uploads/TS_B_Limay-F.pdf

Technical specifications in development

Silvopastoral Planting: Currently in development, the Silvopastoral technical specification acknowledges the need for cattle pastures by integrating trees and improved pasture with livestock. The trees improve pasture productivity, provide shade, and produce timber, forage and fruit products for the farmers.

Summary of total participation and project size

The following data represents the scale of the project to date (all vintages).

The total number of producers with registered PES agreements:	81
The total area covered by the project:	155.3 ha equivalent
Total hectares Mixed Species Plantation:	126.0 ha
Total hectares Boundary Planting:	35.8 km (29.3 ha equivalent)

4. Submission for Plan Vivo Certificate Issuance

Recruitment of new producers

As demand for Taking Root's carbon offsets is greater than our current level of production, there is no waiting list of producers. When recruiting for the 2011 vintage, our technicians traveled to selected communities within our project boundary and spoke with farmers about the project. If they met the criteria and agreed to our terms, we asked them to join.

Recruitment challenges

Meeting client demand

Due to the success of the previous year, Taking Root decided to almost triple the territory for 2011. As a result, the challenge we encountered was in recruiting enough producers to meet the demands of our clients.

Building relationships: In our previous year, the technician responsible for recruitment at the time was able to easily recruit producers from his own community, as he had already established relationships there. This year, however, our group of technicians ventured into new communities with which they had no previous relationships. Without this or a strong knowledge of our project, farmers were less inclined to offer large pieces of land to the project. Consequently technicians had to recruit more farmers to meet the land requirements for 2011.

Solution - Word of mouth: Throughout the project, Taking Root has learned that producers are often willing to contribute more land again the following year, especially once they receive payments. Furthermore, word spreads quickly through the communities and other farmers become interested. Now as our project expands, more farmers become familiar with us and are eager to take part.

Project sales and allocations

Table 2: Project CO_2 sales and allocations for the 2011 vintage

Total volume of CO_2 forward sold	33,684 tCO_2
Total sale price	
Number of producers allocated to buyers	68
Total area	113.7 ha equivalent
Technical specification applied	Mixed species plantation and Boundary planting
Price to community fund per offset	
% of sale price to reach communities as PES	60%

For a complete list of producers and payments, see Monitoring Results in Appendix 2.

5. Sales of Plan Vivo Certificates

Carbon sales

The following table outlines the distribution of Plan Vivo Certificates sold to date.

Table 3: Carbon sales to date

Vintage	Name of purchaser	Number of Plan Vivo certificates purchased	Price per certificate (USD)	Total amount received (USD)
2010	PrimaKlima - weltweit- e.V.	11,009		
2010	Carbon Advice Group	95		
2010	CLEVEL	650		
2010	Carbon Finance Intel	50		
2010	Taking Root	538		
2010	**Total**	**12,342**		
2011	PrimaKlima - weltweit- e.V.	20,950		
2011	CLEVEL	850		
2011	CLEVEL	1,350		
2011	Zero Mission	1,000		
2011	Taking Root	9,534		
2011	**Total**	**33,684**		
All years	**GRAND TOTAL**	**46,026**		

Please note that pricing information has been removed by the Plan Vivo Foundation for client confidentiality.

6. Monitoring Results

Monitoring results

For detailed monitoring results for new plan vivos, see Appendix 2.

For monitoring results for continuing participants, see Appendix 3.

Barriers faced

Despite the following barriers, the monitoring was successful overall and the technicians were able to use a very efficient database for recording the data.

Above: Technicians measure the height of trees from the previous year.

Communication barriers: As the 2011 monitoring followed a new system, there was an initial misunderstanding between Taking Root and the technicians on how to report data and on what trees to count. Fortunately the issue was recognized early during a routine review of the results so the teams were able to evaluate the process immediately and resolve the issue.

The Taking Root team has found that being physically present in Nicaragua to help resolve such issues is always best, but is not always possible. Luckily with the use of Skype, the teams can share screens and review documents together.

Lost or missing trees: As a consequence of the abovementioned communication issue, the technicians were not initially recording whether trees were dead, missing, or not present, so the early results didn't clearly indicate if there were any losses of trees or if trees simply weren't planted. This will be addressed in the future with more rigorous monitoring standards.

Unsuccessful monitoring of producers

Where plan vivos were monitored unsuccessfully, the following causes were apparent:

Missing trees: Producers did not always receive or start enough trees, due to the miscalculations mentioned above. Likewise, some trees did not survive once seeded or planted. These producers will not be penalized but will have to make up for the lost trees in the next planting season. Furthermore, we are seeding and planting many a larger buffer of trees in the upcoming season.

Unplanted trees: Another scenario involves farmers who didn't plant their trees for unknown reasons. These farmers were penalized in that they were not paid, but they have the opportunity to plant these trees and receive payment upon successful monitoring next year.

Improvements to the monitoring process

A new monitoring system has been created so that monitoring is much better documented than the previous year.

Permanent sample plots: The new monitoring process uses permanent sample plots, which are distributed systematically throughout each stand.

To identify each plot, a high-density, thick wooden stake is then inserted into the ground. Approximately 20 cm of the stake should protrude above ground, be painted with a bright color and a have a big nail hammered into the top of it. The paint is used to facilitate locating it whereas the nail can be used to attach the plot cord. Furthermore, should the stake not be replaced before entirely rotting, a metal detector can be used to pinpoint the plot's exact location for replacement because of to the nail.

This way, the technician is sampling from the same locations each year. The benefit is that the monitoring will track specific tree growth and species composition, as well as a number of other silvicultural attributes, over time.

Larger sample plots: Another change is the increase in the sampling plot size. This allows the technician to monitor more area in fewer plots, minimizing travel time.

Single monitoring technician: In order to streamline the process and make the results more consistent, the new monitoring system only engages one technician to do the monitoring.

Technical improvements: With this new system, the monitoring results are integrated into the main project database. This means that this database tracks the performance of the project on all levels, including the stand, the producer, the year and the entire project.

7. PES update

Payments for Ecosystem Services

The table below provides a summary of the payments for ecosystem services made to date.

Payment batch indicates the number of separate times each producer received payments. *Producers paid* refers to the number of producers who successfully met the 2010 monitoring targets. P*ayments issued* represents the unique payments made (number of batches x number of producers).

As shown in the table, producers who planted in 2010 and successfully met their monitoring targets received two payments in 2010 and the first of two payments for 2011. One of the 19 producers did not meet the monitoring targets for 2010, thus was not paid, but was able to catch up in 2011 and receive his first payment.

These 19 producers will receive their second 2011 payment before the end of the year. Likewise, producers who added land in 2011 will receive their first payments once this report has been approved.

For detailed PES information, see Appendix 4.

Table 4: PES summary

Payment year	Vintage	Payment batches	Producers paid	Payments issued	Amount paid*
2010	2010	2	18	36	$4,898.67
2011	2010	1	19	19	$2,530.08
TOTAL		**3**	**19 unique producers**	**55**	**$7,428.75**

**Taking Root has provided many producers with advance payments to build fences as well as to hire help building nurseries, clearing the land before planting and planting the trees. These advance payments are being deducted from future payments at a rate that mirrors the PES schedule. Thus the figures in this table and in Appendix 4 have already had a percentage of the advance payments deducted. (See section 11.3 of* Technical Specification – Mixed Forest Plantation *for PES schedule.)*

Table 5: Producer loans for material and cash advances for project establishment

Vintage	Advance payment amounts
2010	$6,053.37
2011	$20,358.52
TOTAL	**$26,411.89**

8. Ongoing Community Participation

Community participation methods

To communicate with community participants throughout the process, Taking Root implemented the following:

Planting manuals

To ensure effective education of participating farmers on the key aspects of the project, Taking Root provided producers with planting manuals, detailing the planting pattern, measurements and tree species used. This helped significantly speed up the process and avoid confusion among producers.

Group training

Taking Root held group training sessions with each community to go over the planting and payment process.

Community meetings

In order to raise awareness about the project and gather insight from stakeholders, Taking Root held meetings with the mayor and various community leaders, as well as with producers in the participating communities.

Discussion outcomes

Questions raised

In discussion, participants often asked about such things as fruit trees, minimum land, subdividing properties and tree ownership. It was important that they clearly understood the participation and payment requirements and the benefits of the project.

Resulting actions

During the meetings, we learned that participants preferred bi-annual payments instead of annual. Producers also wanted the payment schedule to coincide with the time when jobs needed to be done (i.e., clearing land). These changes were implemented in 2011 and the goal is to further solidify the payment dates in 2012.

Meeting minutes

For meeting minutes, please refer to the following files (delivered in connection therewith):

- REUNION EL PEDERNAL 1.doc
- REUNION MATEARES 1.doc
- REUNION PLATANARES 1.doc
- REUNION SANTA CRUZ 1.doc
- REUNION TRANQUERA 1.doc

9. Breakdown of Operational Costs

Operational costs

The following table provides an overview of all operational costs connected to the project from 1 October 2010 – 30 September 2011.

Table 6: Operational costs

Expenses	Cost (USD)
Human resources	$118,608
Office/administration	$15,853
Equipment/materials	$2,077
Travel	$7,776
Production expenses	$9,603
Consultancy	$12,155
Plan Vivo fees*	$11,789
Training	$5,165
Marketing/Sales	$3,089
Financial fees	$12,905
Offsets in stock**	
Community fund***	
Total Expenses	**$260,918**

Income	
Non-offset revenue	$16,327
Sale of offsets	
Grants	$19,920
Donations	$33,400
Total income	

Deficit	
Deficit covered by guaranteed line of credit	

** This excludes the Plan Vivo fees related to a sale from the 2010 planting season received in 2011 [pricing information has been removed for client confidentiality].*

*** Offsets in stock refers to 2010 and 2011 offsets purchased by Taking Root for resale that have yet to be sold.*

**** This excludes contracts made during this financial period earmarked for offsets for the 2012 planting season.*

Appendix 1: Equivalent hectare calculation

"Equivalent hectares" refers to the conversion of units of one technical specification to another, in order to combine the two to better illustrate the project's total size.

In Taking Root's case, the equivalency factor is one hectare of Mixed Species Plantation, or 296.3 tonnes.

In 2011, one kilometer of Boundary Planting sequestered 243 tonnes.

By dividing the tonnage of one kilometer of Boundary Planting by the tonnage of one hectare of Mixed Species Plantation, we calculate that 0.82 hectares of Mixed Species is equal in tonnage to 1 kilometer of Boundary Planting.

If we then multiple the unit lengths in kilometers of the parcels of Boundary Planting by .82, we find the equivalent hectares in Mixed Species. The hectares from both technical specifications can then be aggregated to find the total equivalent hectares planted for the year.

Technical specification	**Tonnes sequestered per unit**	**Equivalent area per tonnage**	**Total area planted**	**Equivalent area planted**
Mixed Species Plantation	296.3 tonnes / hectare	1 ha = 1 ha	126 ha	126 ha
Boundary Planting	243 tonnes / kilometer	1 km = 0.82 ha	35.8 km	29.3 ha equivalent (35.8 km x 0.82)

Appendix 2: Monitoring results for new plan vivos

The following table outlines the 2011 monitoring results for new plan vivos.

Location	Plan Vivo	Parcel Number	Name of Producer[1]	Technical Specification	Area	Units	Monitoring			Saleable tCO_2
							Target **	Result **	% of Plots Planted	
Limay	10.1.001	10.1.001.11.1.01		Mixed Species	1.1	Hectares	6	6	100%	329
Limay	10.1.001	10.1.001.11.1.02		Mixed Species	0.5	Hectares	3	3	100%	139
Limay	10.1.006	10.1.006.11.1.01		Mixed Species	0.8	Hectares	7	0	0%	237
Limay	10.1.009	10.1.009.11.1.01		Mixed Species	0.7	Hectares	5	0	0%	207
Limay	10.1.009	10.1.009.11.1.02		Mixed Species	0.4	Hectares	2	0	0%	110
Limay	10.1.013	10.1.013.11.1.01		Mixed Species	0.4	Hectares	3	2	67%	107
Limay	10.1.013	10.1.013.11.1.02		Mixed Species	0.4	Hectares	2	2	100%	130
Limay	10.1.014	10.1.014.11.1.01		Mixed Species	0.2	Hectares	1	1	100%	62
Limay	10.1.014	10.1.014.11.1.02		Mixed Species	0.3	Hectares	1	0	0%	77
Limay	10.1.014	10.1.014.11.2.01		Boundary Planting	1.0	Kilometers	9	0	0%	250
Limay	10.1.015	10.1.015.11.1.01		Mixed Species	0.6	Hectares	4	0	0%	193
Limay	10.1.020	10.1.020.11.2.01		Boundary Planting	0.9	Kilometers	7	0	0%	207
Limay	10.1.020	10.1.020.11.2.02		Boundary Planting	0.2	Kilometers	2	0	0%	53
Limay	10.1.020	10.1.020.11.2.03		Boundary Planting	0.1	Kilometers	1	0	0%	29
Limay	10.1.020	10.1.020.11.2.04		Boundary Planting	0.6	Kilometers	5	0	0%	146
Limay	10.1.021	10.1.021.11.2.01		Boundary Planting	0.3	Kilometers	3	0	0%	68
Limay	10.1.021	10.1.021.11.2.02		Boundary Planting	0.8	Kilometers	7	0	0%	197
Limay	10.1.022	10.1.022.11.2.01		Boundary Planting	0.4	Kilometers	3	0	0%	90
Limay	10.1.022	10.1.022.11.2.02		Boundary Planting	0.3	Kilometers	3	0	0%	78

[1] Due to data protection regulations, the names of participants have been removed from the public version of this document

Limay	11.1.001	11.1.001.11.1.01		Mixed Species	1.0	Hectares	6	6	100%	287
Limay	11.1.001	11.1.001.11.1.02		Mixed Species	0.4	Hectares	2	0	0%	116
Limay	11.1.002	11.1.002.11.1.01		Mixed Species	1.1	Hectares	7	3	43%	335
Limay	11.1.003	11.1.003.11.1.01		Mixed Species	0.5	Hectares	3	3	100%	154
Limay	11.1.003	11.1.003.11.2.01		Boundary Planting	1.1	Kilometers	9	0	0%	275
Limay	11.1.003	11.1.003.11.2.02		Boundary Planting	0.3	Kilometers	3	0	0%	85
Limay	11.1.003	11.1.003.11.2.03		Boundary Planting	0.2	Kilometers	2	0	0%	46
Limay	11.1.004	11.1.004.11.1.01		Mixed Species	1.2	Hectares	6	6	100%	350
Limay	11.1.005	11.1.005.11.1.01		Mixed Species	0.7	Hectares	3	3	100%	196
Limay	11.1.005	11.1.005.11.1.02		Mixed Species	0.7	Hectares	5	4	80%	199
Limay	11.1.006	11.1.006.11.1.01		Mixed Species	1.0	Hectares	6	6	100%	284
Limay	11.1.006	11.1.006.11.1.02		Mixed Species	0.1	Hectares	*	*	*	18
Limay	11.1.007	11.1.007.11.1.01		Mixed Species	0.7	Hectares	3	1	33%	213
Limay	11.1.007	11.1.007.11.2.01		Boundary Planting	2.1	Kilometers	3	3	100%	510
Limay	11.1.008	11.1.008.11.1.01		Mixed Species	1.2	Hectares	10	0	0%	361
Limay	11.1.009	11.1.009.11.1.01		Mixed Species	0.5	Hectares	2	1	50%	145
Limay	11.1.009	11.1.009.11.1.02		Mixed Species	0.5	Hectares	3	3	100%	139
Limay	11.1.010	11.1.010.11.1.01		Mixed Species	0.8	Hectares	3	3	100%	225
Limay	11.1.010	11.1.010.11.1.02		Mixed Species	0.5	Hectares	1	0	0%	154
Limay	11.1.011	11.1.011.11.1.01		Mixed Species	0.9	Hectares	5	5	100%	252
Limay	11.1.011	11.1.011.11.1.02		Mixed Species	0.7	Hectares	5	0	0%	201
Limay	11.1.012	11.1.012.11.1.01		Mixed Species	0.6	Hectares	5	5	100%	193
Limay	11.1.012	11.1.012.11.2.01		Boundary Planting	3.0	Kilometers	10	10	100%	717
Limay	11.1.013	11.1.013.11.1.01		Mixed Species	0.6	Hectares	4	0	0%	187
Limay	11.1.013	11.1.013.11.1.02		Mixed Species	0.7	Hectares	2	2	100%	201
Limay	11.1.014	11.1.014.11.1.01		Mixed Species	0.8	Hectares	3	3	100%	246
Limay	11.1.014	11.1.014.11.1.02		Mixed Species	0.4	Hectares	3	0	0%	121
Limay	11.1.015	11.1.015.11.1.01		Mixed Species	1.4	Hectares	9	9	100%	418
Limay	11.1.016	11.1.016.11.1.01		Mixed Species	0.8	Hectares	7	7	100%	225
Limay	11.1.016	11.1.016.11.2.01		Boundary Planting	1.0	Kilometers	8	0	0%	245

Limay	11.1.016	11.1.016.11.2.02		Boundary Planting	0.2	Kilometers	2	0	0%	44
Limay	11.1.016	11.1.016.11.2.03		Boundary Planting	0.2	Kilometers	2	0	0%	51
Limay	11.1.017	11.1.017.11.1.01		Mixed Species	1.5	Hectares	5	5	100%	430
Limay	11.1.018	11.1.018.11.1.01		Mixed Species	0.8	Hectares	5	5	100%	222
Limay	11.1.018	11.1.018.11.2.01		Boundary Planting	0.6	Kilometers	4	4	100%	134
Limay	11.1.018	11.1.018.11.2.02		Boundary Planting	0.2	Kilometers	1	1	100%	53
Limay	11.1.018	11.1.018.11.2.02		Boundary Planting	0.2	Kilometers	1	1	100%	53
Limay	11.1.019	11.1.019.11.1.01		Mixed Species	2.3	Hectares	20	18	90%	696
Limay	11.1.020	11.1.020.11.1.01		Mixed Species	0.6	Hectares	0	0	n/a	163
Limay	11.1.020	11.1.020.11.1.02		Mixed Species	0.9	Hectares	5	5	100%	279
Limay	11.1.021	11.1.021.11.1.01		Mixed Species	0.8	Hectares	3	3	100%	243
Limay	11.1.021	11.1.021.11.2.01		Boundary Planting	0.4	Kilometers	1	1	100%	107
Limay	11.1.021	11.1.021.11.2.02		Boundary Planting	0.1	Kilometers	1	0	0%	27
Limay	11.1.021	11.1.021.11.2.03		Boundary Planting	0.4	Kilometers	4	0	0%	100
Limay	11.1.022	11.1.022.11.1.01		Mixed Species	0.1	Hectares	*	*	*	39
Limay	11.1.022	11.1.022.11.1.02		Mixed Species	0.9	Hectares	5	5	100%	276
Limay	11.1.023	11.1.023.11.1.01		Mixed Species	1.2	Hectares	5	5	100%	353
Limay	11.1.024	11.1.024.11.1.01		Mixed Species	1.8	Hectares	12	12	100%	519
Limay	11.1.025	11.1.025.11.1.01		Mixed Species	4.4	Hectares	15	7	47%	1310
Limay	11.1.026	11.1.026.11.1.01		Mixed Species	2.3	Hectares	14	14	100%	676
Limay	11.1.027	11.1.027.11.1.01		Mixed Species	0.5	Hectares	2	2	100%	148
Limay	11.1.027	11.1.027.11.1.02		Mixed Species	0.6	Hectares	3	3	100%	184
Limay	11.1.027	11.1.027.11.2.01		Boundary Planting	0.3	Kilometers	3	0	0%	70
Limay	11.1.027	11.1.027.11.2.02		Boundary Planting	0.1	Kilometers	1	0	0%	17
Limay	11.1.027	11.1.027.11.2.03		Boundary Planting	0.5	Kilometers	4	0	0%	112
Limay	11.1.027	11.1.027.11.2.04		Boundary Planting	0.2	Kilometers	2	0	0%	53
Limay	11.1.027	11.1.027.11.2.05		Boundary Planting	0.3	Kilometers	3	0	0%	61
Limay	11.1.027	11.1.027.11.2.06		Boundary Planting	0.3	Kilometers	3	0	0%	78
Limay	11.1.028	11.1.028.11.1.01		Mixed Species	0.3	Hectares	2	0	0%	80
Limay	11.1.028	11.1.028.11.1.02		Mixed Species	1.5	Hectares	6	4	67%	450

Limay	11.1.028	11.1.028.11.1.03		Mixed Species	0.5	Hectares	1	0	0%	151
Limay	11.1.029	11.1.029.11.1.01		Mixed Species	1.4	Hectares	5	5	100%	400
Limay	11.1.030	11.1.030.11.1.01		Mixed Species	2.2	Hectares	10	9	90%	649
Limay	11.1.031	11.1.031.11.1.01		Mixed Species	1.4	Hectares	4	4	100%	400
Limay	11.1.032	11.1.032.11.1.01		Mixed Species	0.9	Hectares	7	7	100%	273
Limay	11.1.033	11.1.033.11.1.01		Mixed Species	0.9	Hectares	5	5	100%	273
Limay	11.1.034	11.1.034.11.1.01		Mixed Species	1.0	Hectares	5	5	100%	287
Limay	11.1.034	11.1.034.11.1.02		Mixed Species	0.3	Hectares	1	1	100%	95
Limay	11.1.035	11.1.035.11.1.01		Mixed Species	1.5	Hectares	3	2	67%	439
Limay	11.1.036	11.1.036.11.1.01		Mixed Species	1.5	Hectares	6	6	100%	453
Limay	11.1.037	11.1.037.11.1.01		Mixed Species	0.5	Hectares	1	1	100%	157
Limay	11.1.037	11.1.037.11.1.02		Mixed Species	0.3	Hectares	1	1	100%	86
Limay	11.1.037	11.1.037.11.2.01		Boundary Planting	0.5	Kilometers	4	0	0%	112
Limay	11.1.037	11.1.037.11.2.02		Boundary Planting	0.4	Kilometers	4	0	0%	102
Limay	11.1.037	11.1.037.11.2.03		Boundary Planting	0.5	Kilometers	4	0	0%	112
Limay	11.1.038	11.1.038.11.2.01		Boundary Planting	1.6	Kilometers	9	9	100%	394
Limay	11.1.038	11.1.038.11.2.02		Boundary Planting	0.4	Kilometers	3	2	67%	92
Limay	11.1.039	11.1.039.11.1.01		Mixed Species	1.9	Hectares	6	6	100%	569
Limay	11.1.040	11.1.040.11.1.01		Mixed Species	0.8	Hectares	0	0	n/a	240
Limay	11.1.040	11.1.040.11.1.02		Mixed Species	0.5	Hectares	4	4	100%	148
Limay	11.1.040	11.1.040.11.2.01		Boundary Planting	1.5	Kilometers	9	2	22%	367
Limay	11.1.040	11.1.040.11.2.02		Boundary Planting	0.1	Kilometers	1	0	0%	27
Limay	11.1.040	11.1.040.11.2.03		Boundary Planting	0.0	Kilometers	1	0	0%	7
Limay	11.1.041	11.1.041.11.1.01		Mixed Species	1.4	Hectares	9	9	100%	415
Limay	11.1.042	11.1.042.11.1.01		Mixed Species	1.2	Hectares	3	2	67%	350
Limay	11.1.043	11.1.043.11.1.01		Mixed Species	0.9	Hectares	5	5	100%	276
Limay	11.1.043	11.1.043.11.1.02		Mixed Species	0.4	Hectares	4	2	50%	121
Limay	11.1.044	11.1.044.11.1.01		Mixed Species	0.6	Hectares	1	1	100%	163
Limay	11.1.044	11.1.044.11.1.02		Mixed Species	0.9	Hectares	7	0	0%	261
Limay	11.1.044	11.1.044.11.1.03		Mixed Species	0.9	Hectares	2	2	100%	279

Limay	11.1.045	11.1.045.11.1.01		Mixed Species	1.5	Hectares	2	2	100%	447
Limay	11.1.046	11.1.046.11.1.01		Mixed Species	1.2	Hectares	7	7	100%	364
Limay	11.1.046	11.1.046.11.1.02		Mixed Species	0.5	Hectares	5	5	100%	157
Limay	11.1.046	11.1.046.11.1.03		Mixed Species	0.4	Hectares	2	2	100%	124
Limay	11.1.047	11.1.047.11.1.01		Mixed Species	0.8	Hectares	4	4	100%	231
Limay	11.1.047	11.1.047.11.2.01		Boundary Planting	0.4	Kilometers	3	3	100%	92
Limay	11.1.047	11.1.047.11.2.02		Boundary Planting	0.3	Kilometers	2	2	100%	66
Limay	11.1.047	11.1.047.11.2.03		Boundary Planting	0.6	Kilometers	5	4	80%	136
Limay	11.1.048	11.1.048.11.1.01		Mixed Species	0.7	Hectares	6	5	83%	219
Limay	11.1.048	11.1.048.11.2.01		Boundary Planting	0.1	Kilometers	1	0	0%	22
Limay	11.1.048	11.1.048.11.2.02		Boundary Planting	0.5	Kilometers	4	0	0%	117
Limay	11.1.048	11.1.048.11.2.03		Boundary Planting	0.1	Kilometers	1	0	0%	19
Limay	11.1.048	11.1.048.11.2.04		Boundary Planting	0.2	Kilometers	1	1	100%	58
Limay	11.1.049	11.1.049.11.1.01		Mixed Species	1.3	Hectares	2	0	0%	385
Limay	11.1.050	11.1.050.11.1.01		Mixed Species	0.6	Hectares	5	5	100%	166
Limay	11.1.050	11.1.050.11.2.01		Boundary Planting	0.4	Kilometers	0	0	n/a	100
Limay	11.1.050	11.1.050.11.2.02		Boundary Planting	0.8	Kilometers	1	1	100%	197
Limay	11.1.051	11.1.051.11.1.01		Mixed Species	0.8	Hectares	2	2	100%	246
Limay	11.1.051	11.1.051.11.1.02		Mixed Species	0.4	Hectares	2	0	0%	110
Limay	11.1.052	11.1.052.11.1.01		Mixed Species	0.7	Hectares	6	6	100%	199
Limay	11.1.052	11.1.052.11.1.02		Mixed Species	2.7	Hectares	24	0	0%	785
Limay	11.1.052	11.1.052.11.1.03		Mixed Species	0.9	Hectares	8	0	0%	267
Limay	11.1.053	11.1.053.11.1.01		Mixed Species	2.2	Hectares	19	19	100%	646
Limay	11.1.053	11.1.053.11.2.01		Boundary Planting	0.2	Kilometers	2	0	0%	49
Limay	11.1.053	11.1.053.11.2.02		Boundary Planting	1.4	Kilometers	11	0	0%	335
Limay	11.1.053	11.1.053.11.2.03		Boundary Planting	0.0	Kilometers	1	0	0%	2
Limay	11.1.053	11.1.053.11.2.04		Boundary Planting	0.6	Kilometers	6	0	0%	156
Limay	11.1.054	11.1.054.11.1.01		Mixed Species	1.1	Hectares	7	7	100%	341
Limay	11.1.055	11.1.055.11.1.01		Mixed Species	0.8	Hectares	3	3	100%	222
Limay	11.1.055	11.1.055.11.2.01		Boundary Planting	1.9	Kilometers	3	2	67%	464

Limay	11.1.056	11.1.056.11.1.01		Mixed Species	1.3	Hectares	6	6	100%	382
Limay	11.1.057	11.1.057.11.1.01		Mixed Species	0.2	Hectares	3	2	67%	47
Limay	11.1.057	11.1.057.11.2.01		Boundary Planting	0.5	Kilometers	4	4	100%	122
Limay	11.1.057	11.1.057.11.2.02		Boundary Planting	0.3	Kilometers	2	0	0%	70
Limay	11.1.057	11.1.057.11.2.03		Boundary Planting	0.0	Kilometers	1	0	0%	10
Limay	11.1.057	11.1.057.11.2.04		Boundary Planting	0.1	Kilometers	1	0	0%	15
Limay	11.1.057	11.1.057.11.2.06		Boundary Planting	0.1	Kilometers	1	1	100%	34
Limay	11.1.057	11.1.057.11.2.07		Boundary Planting	0.5	Kilometers	4	4	100%	114
Limay	11.1.058	11.1.058.11.2.01		Boundary Planting	1.0	Kilometers	8	0	0%	238
Limay	11.1.058	11.1.058.11.2.02		Boundary Planting	0.2	Kilometers	2	0	0%	53
Limay	11.1.058	11.1.058.11.2.03		Boundary Planting	1.2	Kilometers	10	0	0%	301
Limay	11.1.058	11.1.058.11.2.04		Boundary Planting	1.7	Kilometers	14	0	0%	423
Limay	11.1.058	11.1.058.11.2.05		Boundary Planting	0.2	Kilometers	0	0	n/a	53
Limay	11.1.059	11.1.059.11.1.01		Mixed Species	0.9	Hectares	3	3	100%	273
Limay	11.1.059	11.1.059.11.2.01		Boundary Planting	1.2	Kilometers	4	4	100%	296

Total areas	**35.8**	**Kilometers*** **	**Total tCO_2**	**33,684**
	84.3	**Hectares**		

** Parcel not monitored due to small size.*

*** Monitoring Target and Monitoring Result are based on number of plots planted.*

**** 35.8 km of Boundary Planting represents to 29.3 ha equivalent of Mixed Species Plantation.*

Note: Monitoring Targets and Monitoring Results marked as 0 mean that no seedlings were available for these producers to plant. For this reason, no monitoring was done and producers were not penalized.

Appendix 3: Monitoring results for continuing plan vivos

The following table outlines monitoring results for continuing participants (plan vivos where Certificates are already issued).

Vintage	Year of monitoring	Location	Plan Vivo	Parcel Number	Name of producer[2]	Technical Specification	Area (ha)	Target *	Result *	% of Plots Seeded	tCO_2 generated
2010	2	Limay	10.1.001	10.1.001.10.1.01		Mixed Species	1.0	9	9	100%	285
2010	2	Limay	10.1.002	10.1.002.10.1.01		Mixed Species	1.9	10	10	100%	574
2010	2	Limay	10.1.002	10.1.002.10.1.02		Mixed Species	0.9	7	7	100%	273
2010	2	Limay	10.1.003	10.1.003.10.1.01		Mixed Species	3.4	29	20	69%	1005
2010	2	Limay	10.1.004	10.1.004.10.1.01		Mixed Species	0.9	6	6	100%	264
2010	2	Limay	10.1.005	10.1.005.10.1.01		Mixed Species	0.9	6	6	100%	257
2010	2	Limay	10.1.005	10.1.005.10.1.02		Mixed Species	0.6	4	0	0%	188
2010	2	Limay	10.1.006	10.1.006.10.1.01		Mixed Species	1.4	9	0	0%	414
2010	2	Limay	10.1.007	10.1.007.10.1.01		Mixed Species	1.7	9	9	100%	505
2010	2	Limay	10.1.008	10.1.008.10.1.01		Mixed Species	2.1	8	8	100%	611
2010	2	Limay	10.1.009	10.1.009.10.1.01		Mixed Species	1.6	8	8	100%	480
2010	2	Limay	10.1.010	10.1.010.10.1.01		Mixed Species	2.1	12	10	83%	613
2010	2	Limay	10.1.011	10.1.011.10.1.01		Mixed Species	1.7	11	11	100%	497

[2] Due to data protection regulations, the names of participants have been removed from the public version of this document

2010	2	Limay	10.1.012	10.1.012.10.1.01		Mixed Species	1.0	6	6	100%	287
2010	2	Limay	10.1.013	10.1.013.10.1.01		Mixed Species	1.0	6	5	83%	281
2010	2	Limay	10.1.014	10.1.014.10.1.01		Mixed Species	1.6	11	11	100%	468
2010	2	Limay	10.1.015	10.1.015.10.1.01		Mixed Species	1.1	8	8	100%	319
2010	2	Limay	10.1.015	10.1.015.10.1.02		Mixed Species	1.6	11	10	91%	471
2010	2	Limay	10.1.016	10.1.016.10.1.01		Mixed Species	2.1	18	13	72%	612
2010	2	Limay	10.1.016	10.1.016.10.1.02		Mixed Species	0.8	4	0	0%	236
2010	2	Limay	10.1.016	10.1.016.10.1.03		Mixed Species	1.7	14	14	100%	494
2010	2	Limay	10.1.017	10.1.017.10.1.01		Mixed Species	3.0	26	24	92%	881
2010	2	Limay	10.1.018	10.1.018.10.1.01		Mixed Species	3.1	26	26	100%	930
2010	2	Limay	10.1.019	10.1.019.10.1.01		Mixed Species	1.5	13	7	54%	451
2010	2	Limay	10.1.020	10.1.020.10.1.01		Mixed Species	0.4	3	1	33%	129
2010	2	Limay	10.1.020	10.1.020.10.1.02		Mixed Species	0.9	6	6	100%	258
2010	2	Limay	10.1.021	10.1.021.10.1.01		Mixed Species	1.1	6	6	100%	337
2010	2	Limay	10.1.022	10.1.022.10.1.01		Mixed Species	0.5	4	4	100%	151
2010	2	Limay	10.1.022	10.1.022.10.1.02		Mixed Species	0.2	1	0	0%	68

Total hectares	**41.7**	**Total tCO_2**	**12,342**

*** Monitoring Target and Monitoring Result are based on number of plots planted.*

Note: Individual parcel tCO_2 Generated *does not perfectly sum to* Total tCO_2 *due to rounding errors. The total differs by three (3) tonnes.*

Appendix 4: Payments for Ecosystem Services to date

The following table lists all payments made to producers to date, including how much has be since the last annual report. A percentage of the advance payments made to producers has al from these amounts.

Payment Year	Vintage	PV Number	First Name[3]	Last Name
2010	2010	10.1.001		
2010	2010	10.1.001		
2010	2010	10.1.002		
2010	2010	10.1.002		
2010	2010	10.1.003		
2010	2010	10.1.003		
2010	2010	10.1.004		
2010	2010	10.1.004		
2010	2010	10.1.006		
2010	2010	10.1.006		
2010	2010	10.1.005		
2010	2010	10.1.005		
2010	2010	10.1.007		
2010	2010	10.1.007		
2010	2010	10.1.009		
2010	2010	10.1.009		
2010	2010	10.1.010		
2010	2010	10.1.010		
2010	2010	10.1.011		
2010	2010	10.1.011		
2010	2010	10.1.013		
2010	2010	10.1.013		
2010	2010	10.1.012		
2010	2010	10.1.012		
2010	2010	10.1.014		
2010	2010	10.1.014		
2010	2010	10.1.016		
2010	2010	10.1.016		
2010	2010	10.1.015		
2010	2010	10.1.015		

[3] Due to data protection regulations, the names of participants have been removed from the public version of this docun

2010	2010	10.1.017			$175.54
2010	2010	10.1.017			$235.59
2010	2010	10.1.018			$193.02
2010	2010	10.1.018			$258.13
2010	2010	10.1.019			$87.06
2010	2010	10.1.019			$117.19
2011	2010	10.1.001			$64.77
2011	2010	10.1.002			$162.63
2011	2010	10.1.003			$246.64
2011	2010	10.1.004			$62.66
2011	2010	10.1.006			$87.78
2011	2010	10.1.005			$96.08
2011	2010	10.1.007			$115.29
2011	2010	10.1.008			$122.68
2011	2010	10.1.009			$102.35
2011	2010	10.1.010			$134.71
2011	2010	10.1.011			$106.50
2011	2010	10.1.013			$63.65
2011	2010	10.1.012			$59.25
2011	2010	10.1.014			$108.86
2011	2010	10.1.016			$298.63
2011	2010	10.1.015			$173.12
2011	2010	10.1.017			$202.14
2011	2010	10.1.018			$221.96
2011	2010	10.1.019			$100.37

Total	**All years**	**$7,428.75**
	2010	**$4,898.67**
	2011	**$2,530.08**

Note: The amounts of the second payments made to producers in 2010 were updated based on more precise area measurements, thus vary slightly from the estimates made in the 2010 Annual Report.