The Cochabamba Project

CLIMATE ACTION PLAN

ArBolivia

Tree Planting & Maintenance Activities Report

for

Limited

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The Cochabamba Project Ltd was established in March 2009 as an Industrial and Provident Society for the Benefit of the Community, a public-spirited "not-for-profit organisation formed for the specific purpose of supporting a reforestation project which commenced operations in 2007 and is known as ArBolivia.

This venture is a true partnership with Bolivian farmers, as net revenues from the commercial timber lots are shared equally between the society and the farmers, with the former providing investment capital and the latter providing land and labour. The society's investment is however far more than this. As a not-for-profit society, a significant pro- portion of our funds are used for social rather than commercial objectives. In addition, whilst we are fully focussed on achieving profitability as soon as practicable, any eventual surplus after paying interest to members will be used to benefit the local communities in Bolivia.

Arbolivia has been acknowledged for its role not only in mitigating the impact of climate change but also in providing quantifiable benefits both for the communities in which it operates and for biodiversity in the region.

The Amazon Rainforest is almost unquestionably one of the most valuable and important single habitats on our planet making a vital contribution in maintaining the balance of oxygen in our atmosphere and providing unrivalled biodiversity[1]. Over the last few decades, however, the western fringes of the Amazon have been the scene of some of the most aggressive deforestation in the world[2].

Driven by desperation, migrants have moved down from the Andes and have now been granted official title to land within the perimeter of the rainforest, enabling them to exploit the valuable timber and establish smallholdings to eke out a living from the land[3]. After decades of adopting poor agricultural practices and without the capital to invest in a viable alternative, smallholders are still forced to continue their "slash and burn" methods in order to maintain their meagre existence. Without an economically viable alternative, these problems will persist.

ArBolivia has therefore been established to tackle the multiple problems of poor land management, deforestation and poverty, and is the culmination of many years of consultation between local co-operatives, regional and international development agencies and ecological consultants. The Society's investment in ArBolivia not only makes a clearly quantifiable contribution to combating climate change through the sequestration of carbon, but it is also contributing to the protection, repair and enhancement of biodiversity in the region. Most importantly, however, it is providing substantial and sustainable economic benefits to many individual families and local communities in Bolivia.

Background to the ArBolivia Project

In 1995, the Food and Agriculture Organisation of the United Nations (FAO), the European Union and the Belgian government together with the regional government in Bolivia began funding the reforestation of 2000 hectares as part of the regional sustainable development programme. The aim of this program was to promote and implement economically viable and labour-intensive land-use and forest resource management practices in the Cochabamba Tropics in the form of plantation forestry, agroforestry, silvopastoral systems and sustainable management of residual forests.

In 2002 the Centro Tecnico Forestal (Cetefor), a Bolivian foundation set up to attract international investment into sustainable forestry and farming development, signed an agreement with Sicirec BV, an experienced firm of consultants specialising in sustainable tropical forestry from the Netherlands. Sicirec's brief was to create a comprehensive programme, which would qualify as a Clean Development Mechanism activity. In order to deliver the project on the ground Sicirec Group established a separate, independent company, Sicirec Bolivia Limitida, which is registered in Bolivia. (Sicirec Group does not own shares in Sicirec Bolivia but is represented on its board of directors. This ensures that, in the event of the demise of Sicirec Group, no charge would be levied against the assets of Sicirec Bolivia.) The formal name of this joint venture vehicle was the "Asociación Accidental Cetefor Sicirec" (AACS). In practice Cetefor has suffered like many NGOs from lack of funding and this partnership is to all intents and purposes redundant with Sicirec Bolivia having a majority on the board of the AACS and complete control of the project and its finances.

AACS was established in order to execute contracts with individual smallholders, apply for accreditation as a Clean Development Mechanism (CDM) and receive funding from the sale of resultant carbon credits, known as Certified Emissions Reductions. After 6 years of monitoring and research relating to the whole portfolio of activities ArBolivia received a positive validation report from the Designated Operational Entity (DOE) in 2007 resulting in the registration of the first official CDM-AR Small Scale Activity (registration number 2510)[4] in 2009. An Emissions Reduction Purchase Agreement (ERPA) was signed by the Flemish government for the forward purchase of credits.

A total of 8 separate Project Design Documents (PDDs) covering a combined surface of 6,000 hectares were to be submitted for registration under UNFCCC regulations. A further 1,200 hectares were also to be dedicated to conservation activities outside the remit of CDM activity. However at the end of 2009 only the first of these PDDs had received a Letter of Approval (LOA) from the Bolivian government. Following the failure of talks at the Copenhagen summit in November 2009 the Bolivian government withdrew its support for CDM, meaning that ArBolivia could no longer count on further LOAs and would therefore no longer be able to deliver the certification required by the Flemish government under the ERPA. This meant that ArBolivia had to seek alternative certification in order to sell its credits in the voluntary market, where approval from the host country is not needed. A new submission for current and projected activities was subsequently made for certification under the Plan Vivo standard, which was granted on 31st May 2011.

About the Society

The Cochabamba Project Ltd is an Industrial and Provident Society for the Benefit of the Community and operates on a 'one member one vote' principle, irrespective of the size of a member's shareholding. The society is governed by its rules which are available on the society's website at **www.cochabamba.coop.** The purpose of the society is to benefit the rural communities of the departments of Cochabamba, Santa Cruz, Beni and La Paz in Bolivia. The directors intend to achieve this by investing the society's funds for the foreseeable future in the ArBolivia project. The society was formed on 9th March 2009. As at 31st October 2012 the society had issued share capital and loan stock in excess of £2m and had more than 400 members.

The society owns the rights to a 50% share in the revenues from 1068 of the 1200 hectares currently under management, which are expected to commence in 2013/4. In addition it also owns the rights to over 300 tonnes of verified emissions reductions (as at 31st October 2011) relating to approximately 85% of the hectares planted to date. The remainder of the timber rights and carbon credits are owned by the Sicirec Mixfund and Sicirec BV.

The society was formed to provide a mechanism for socially minded individuals and organisations to pool their financial resources in order to fund a commercial forestry operation incorporating exemplary social and environmental standards. Membership of the society is afforded to holders of ordinary shares. These shares can be withdrawn in accordance with the society's rules but cannot be sold or transferred and there is no prospect of them ever being worth more than their nominal value).

In consideration of its funding commitment to the ArBolivia project the rights to 84% of these credits were then transferred to the society and the remainder to Sicirec BV and the Sicirec MixFund. The society has since signed a new ERPA with the German company, Forest Finance GmbH and has received an initial payment for delivery of the first 10,000 tonnes. In addition, Forest Finance has assisted with a further submission for certification under the Carbon Fix Standard which is more widely known in Germany. It has further agreed to purchase and pay for a minimum of 25,000 tonnes of Carbon Fix credits on certification. As at 31st October we were awaiting the independent verification report by Rainforest Alliance following their site inspection which was completed in the first week of September. The society has also sold smaller volumes with a number of other clients.

The society is planning to increase its commercial forestry activity to approximately 3,000 hectares of commercial timber within small, isolated parcels owned by roughly 1000 smallholders who belong to co operatives within the departments of Cochabamba, Santa Cruz, Beni and La Paz. Sicirec Bolivia is also seeking further finance to develop agroforestry (cocoa and citrus fruits) and conservation areas within the project areas.

The Carbon Market

Whilst both the society and its partners in Bolivia recognise the criticisms leveled against what is loosely termed the "carbon market" it is undeniable that the many social and environmental impacts, which ArBolivia delivers, are in every sense "additional" to profit centred investment and would simply not be possible without some form of financial subsidy. We will therefore continue to pursue *all* means of generating the subsidies needed to secure the future of the ArBolivia project and optimise the non-commercial impacts it brings about.

There are two distinct markets for carbon credits – the *compulsory* market and the *voluntary* market:

The compulsory market includes buyers from the 39 developed countries, who signed up to the Kyoto protocol and are obliged under the agreement to pay for credits when they exceed the limit for emissions laid down in the agreement . The most common type of compliance credit is a CER (Certified Emission Reduction unit) which originates from projects in developing counties. Certification and overall approval of these abatement projects and their credits is known as the Clean Development Mechanism (CDM). In order to gain accreditation CDM projects must demonstrate:

- The amount of carbon they lock up for the long term after taking account of all "leakage" (caused, for example by relocating the damaging activities elsewhere)
- A positive effect on biodiversity
- A positive and sustainable effect on local communities, based on full consultation and agreement
- "Additionality" – i.e. that the project would not have gone ahead without the financial subsidy afforded by credits.

It is extremely difficult for forestry projects not only to fulfill the conditions for CDM status but also to be able to evaluate them. For these reasons very few reforestation projects have achieved accreditation to date but ArBolivia was one of the first three to do so. However, following the Copenhagen summit in 2009 the Bolivian government withdrew support for the CDM system and as a result ArBolivia lost any prospect of being able to sell its CERs under CDM. It has nevertheless been independently audited and has been shown to have met all the exacting quality standards required to do so.

ArBolivia subsequently sought verification for *Voluntary* Emissions Reductions (VERs) for sale in the voluntary market In consideration of the society's commitment to continue funding ArBolivia at that stage the project the majority of the rights to carbon credits were transferred to the society, which is now an authorised reseller of ArBolivia VERs

Plan Vivo

Plan Vivo is a UK based foundation which provides accreditation for VERs solely from forestry projects which can demonstrate a high level of community involvement, social benefits and positive environmental credentials, such as the use of native species. A vital factor for projects themselves is that Plan Vivo's VERs can be sold as soon as verification is granted — i.e. at the start of the project when finance is most needed to pay for planting and establishment. Certification under the Plan Vivo standard was granted on 31st May 2011.

CarbonFix / Gold Standard

CarbonFix is a non-profit organisation registered under German law, whose statutory purpose is to foster climate forestation projects and aims to increase the amount of sustainably managed forests and decrease global CO2 levels. Gold Standard is arguably the most prestigious carbon standard in the world. Due to thesame complexities mentioned above, Gold Standard had not developed a module for land use and forestry. However Gold Standard acquired the CarbonFix Foundation in September, with a view to launching its own module in May 2013. A week before the announcement Rainforest Alliance had completed an inspection of the ArBolivia project for Accreditation under the CarbonFix standard but as at 31st October we were still awaiting the final report. However, ArBolivia is now officially a "Transition Project" for the new Gold Standard Land Use & Forestry programme and we believe that this will allow us to sell our VERs at a premium in the market and in much larger volumes than before.

The Climate Action Plan

In light of on-going criticism of the existing carbon trading market and the failure of the international community to agree alternative mechanisms for reducing carbon emissions (and deforestation in particular), a growing number of organisations are committing to sponsoring tree planting schemes, without linking their investment to levels of carbon sequestration.

The society also offers such as scheme, which it calls the "Climate Action Plan". As part of the plan, the VERs relating to the certified trees are retired from the carbon credit register in order to avoid accusations of "double counting".

Characteristics of ArBolivia's Forestry Plantations

The commercial forestry enterprise undertaken by the ArBolivia project is very different from more conventional forestry plantations, even those that are termed 'sustainable':

The forested land is not owned by the project manager. Each forestry parcel is owned by an individual small- holder.

As at 31st October 2012 the forested areas consisted of over 2,000 separate tree lots spread across 4 separate federal states. This geographic distribution and isolation of individual parcels means that any incidence of fire, disease or insect attack is confined and will have little or no impact on other forestry parcels, providing highly effective natural, risk management.

Farmers now choose from 12 native tree species. (At the start teak was also made available due to the lack of high quality native seed.) This range of indigenous tree species on widely dispersed plots contrasts starkly with the norm of monoculture plantations where "identikit" trees stretch monotonously in to the horizon.

This diversity is not only good for the environment but it means that smallholders are able to select species to match the exact conditions of their land, ensuring that survival rates and yields are optimised.

Food and cover crops are planted between trees to provide additional revenues, maintain fertility and reduce the amount of labour required for maintenance.

The high levels of technical expertise and management demanded by this model serve to reduce significantly the risk of disease or poor growth. The cost of this additional skilled manpower is compensated by accreditation for carbon credits, which should only be awarded (although many argue that this is not always the case) to projects which would not otherwise be commercially viable and also provide additional social benefits (improved livelihoods) and environmental benefits (improved soils and biodiversity).

By aggregating supplies for timber merchants ArBolivia can secure much higher prices than individual small- holders are able achieve by themselves. Current estimates indicate a premium of at least 300% and as much as 800% for more mature timber sold for export .

Smallholders therefore have huge incentives to look after their forestry parcels. There are also a range of additional safeguards to ensure that smallholders fulfill their contractual obligations.

Some of the species take only 10 years to mature but the most valuable timber species may take up to 40 years – far longer than any commercial forestry enterprise can entertain, so the ability to generate carbon credits and other environmental services whilst the trees are growing is extremely valuable (as well as revenue from thinnings).

Each smallholder will receive 50% of the net timber revenues from the trees he/she plants and maintains as well as receiving regular payments and technical support in managing the whole of their land.

Social Impacts

The Arbolivia Project is also remarkable for its high social and environmental impacts, which include the following:

- Increased incomes for poor farmers - Profits are shared between local farmers and investors. The livelihood of local subsistence farmers is central to the vision and operation of the project. By participating in the project smallholders can expect to treble their earnings on their forested land over the 40 year project term. Smallholders are also benefitting from both financial and practical assistance to increase efficiency and the yields on their remaining land through agroforestry (e.g. cocoa and citrus fruits) and through collective bargaining and fair trade principles.

- Improved Agricultural Management – Arbolivia works with smallholders to improve agricultural management practices, thereby reducing deforestation and improving smallholder incomes.

- Technical & Marketing Support - Smallholders receive one-to-one practical advice and support on all aspects of farm management, including land use, crop and stock selection as well as marketing support.

- Labour saving— ArBolivia provides access to both hand tools and power tools as well as providing cover crops and other farming methods which reduce the physical effort required to carry out work in the harsh and debilitating conditions of the Amazon jungle.

- Employment – in addition to the staff employed directly ArBolivia contributes to additional employment in local communities, for example seasonal work in its nurseries and the maintenance of its vehicles.

- Education and Capacity Building - Many additional social benefits are provided through a programme of education and capacity building, which makes use of existing social structures such as community committees, farmers co-operatives and other NGOs working in the area. For example, training on fire risks and control is an important additional weapon against "slash and burn" farming methods. The Society also seeks to promote the integrated approach of the project on websites, publications and presentations for schools, community and business organisations.

- NGO Alliances - ArBolivia has also fostered relations with other NGOs and development projects, such as Cordaid and Idepro (see below)

- Microcredit - ArBolivia is working with the Dutch NGO, Cordaid and the Bolivian development organisation Idepro,

- Support of local communities - In the longer term, the directors believe that significant surpluses of revenue may accrue over and above the amounts needed to retain capital for investors. Any such surplus profits after the payment of reasonable interest to members will be used by The Cochabamba Project Ltd to benefit the local communities in the areas in which the project operates.

- Equality—ArBolivia plays an important role in promoting equality, particularly between genders and ethnic groups. A large proportion of our smallholders are female and women are well represented on the forestry committees.

Environmental Benefits

- Avoided deforestation – the project addresses the root causes of deforestation by providing a real economic alter- native to further deforestation and by improving agricultural practices.

- Enhanced biodiversity – By using a wide range of indigenous species of trees, intercropping and working with over 750 farmers on widely distributed plots, as well as creating wildlife corridors, biodiversity is substantially enhanced.

- Nature conservation - A conservation project has been initiated with the ultimate aim of planting 400,000 trees in designated conservation areas. The objective is to counter the loss of biodiversity by repairing dedicated areas and corridors in order to pro- vide a network of secure habitats and thoroughfares. Much of the conservation work is focussed on controlling erosion from increased local flooding during the wet season (which is itself a direct consequence of deforestation).

- Intercropping - Many of the trees are inter-planted with other crops to improve fertility, reduce labour, provide structural support, competition for growth and increased yields per hectare.

- Locally sourced seed - The project only buys locally sourced seed. ArBolivia certifies the best seed trees, which then provide a source of income for the owner and a financial incentive to preserve the tree for the future.

- Carbon capture – ArBolivia's contribution to the sequestration of carbon has been verified through a number of international standards. It was one of the first three forestry projects in the world to receive approval as a "Clean Development Mechanism" under the terms of the Kyoto protocol, although Bolivia has since withdrawn from this pro- gramme. It has since been certified under both the Plan Vivo and is the final stages of verification under the Car- bonFix standards. This means that the carbon absorption of the project has been independently verified to a very high order.

Yapacaní

Yapacaní (or Villa Yapacaní) is the largest town in the province of Ichilo in the Bolivian department of Santa Cruz. It lies on the west bank of the Yapacani River, at the mouth of the Surutú River, 100 km north-west of Santa Cruz de la Sierra, the largest city in Bolivia. It is the centre of the district of Yapacaní Municipio. In the last two decades the town's population has risen from 8,585 inhabitants (census 1992), to 14,665 (census 2001), to 21,622 inhabitants (estimate 2008), providing ample evidence of the pressure of human settlement on the primary forest.

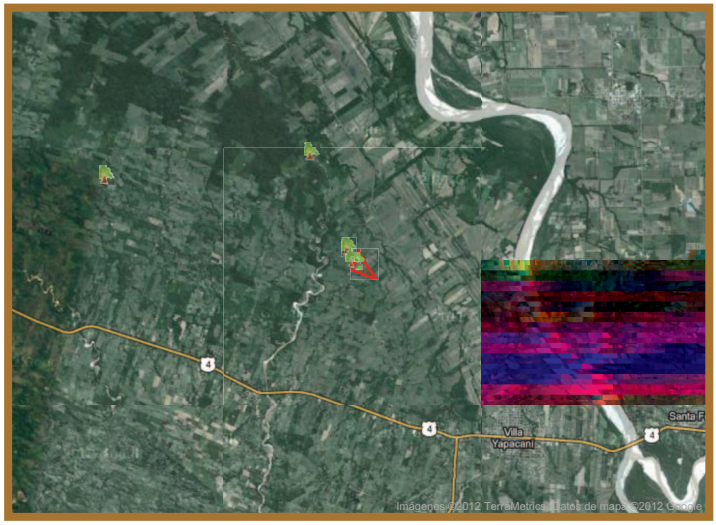
The small villages surrounding Yapacani are accessed by a toll road (2 Bolivianos/ about 20p) called "Faja Norte" which makes a loop from Yapacani north-west later re-joining the main Santa Cruz-Cochabamba road near the community of Ichilo. The road is almost entirely gravel and sometimes becomes difficult to navigate in the rainy season

Smallholders in these communities produce rice, cane sugar, mandarin oranges, and other products. Rice is by far the largest crop produced and provides income to many small communities that lie to the north of town. However, rice depletes the soil so badly that yields can only be maintained for a maximum of three rotations before the cost of conventional fertilizers exceeds the revenue from the harvest. This leads inevitably to further clearing of primary forest within their holding in an effort to access more fertile land.

- Programme of Activities.

commenced its programme of support in 2011 with funding for the planting of 1,224 trees , as detailed below:

Type Of Plantation	commercial forestry
Country	Bolivia
Department	Santa Cruz
Province	Ichilo
Municipality	Yapacani
Community	Valle Hermosa
Owner	Julio Zabala Rojas
Number of Family members	5
Number of children	3
Size of smallholding	31.25 hectares
size of parcel	1.28 hectares
sector code	SCZ - ICH- YAP- VAL - 26 -S3 - PMM4
species planted	Palo Maria (calophyllum brasiliense)
number of trees planted in the lot	1500
year of planting	2011



Over the past year the trees have started to become established. Three inspections have been carried out and satisfactory results have been recorded on each occasion. As a result all contractual payments have been made in full to the owner.

Following consultation between the owner and his technical adviser, further planting has been planned, including both additional commercial forestry for the long term and citrus fruits for shorter term income.

For this tree parcel the species Palo Maria (Calophyllum brasiliense) has been selected. This is one of the "intermediate" species used within the ArBolivia project, with a rotation cycle of about 25 years. The trees are thinned every for years, when approximately 25% of the standing trees are removed to allow the best to develop to an optimum level.

Palo Maria (Calophyllum brasiliense)

Palo Maria is common in the wild but, to our knowledge, had not previously been grown commercially in plantations in Bolivia until introduced as part of the FAO pilot project. Among its other common trade names are: Jacareúba, Guanandi, Árbol de Santa Maria, Brazil beauty leaf and Alexander Laurel.

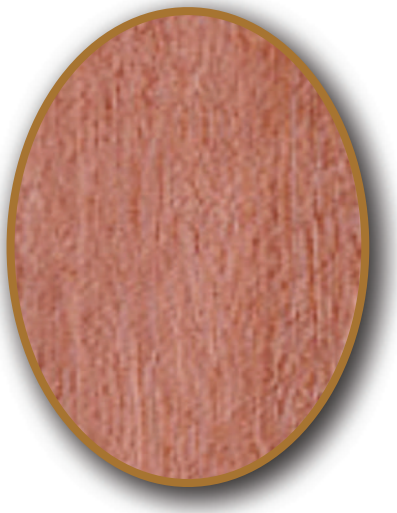
It is an evergreen tree growing to 20–50 m tall, with a trunk up to 1.8 m diameter and a dense, rounded crown. The leaves are opposite, 6.3–12.5 cm long and 3.2–6.3 cm broad, elliptic to oblong or obovate, leathery, hairless, glossy green above, paler below, with an entire margin. The flowers are 10–13 mm diameter, with four white sepals (two larger, and two smaller), and one to four white petals smaller than the sepals; the flowers are grouped in panicles 2.5–9 cm long. The fruit is a globular drupe 25–30 mm diameter.

It is very common in Brazil, from Santa Catarina to Pará, in the Pantanal and throughout the Amazon and Latin America. Its natural dispersion occurs by water (fish) , monkeys and mainly by bats. It occurs between sea level and 1200 meters, often in pure stands, which is quite rare in tropical hardwood trees). For this reason Palo Maria is a welcome substitute for Mahogany which suffers from irregular, illegal logging throughout the Amazon. To cut and transport a single Mahogany tree 30 other trees are also destroyed, because unlike Palo Maria, Mahogany does not occur in pure stands. Conscientious buyers from Europe, Japan and the USA are beginning to understand the importance in conservation of the Amazon Forest and are increasingly more willing to pay a premium for reforested wood; In addition the root system of Palo Maria helps to raise the freatic sheet (or water level) and fertilizes and restores the soil where it is planted.

The wood of Palo Maria promises to be a very important commodity because trees species such as genuine South American Mahogany (Swietenia macrophila) and Brazilian Cedar (Cedrela fissilis) with otherwise similar qualities are susceptible to attack by the caterpillar Hypsipyla grandella, which destroys the main structure of these trees.

Palo Maria also produces a yellow latex (balsam) under the bark, known as Jacareubin which has several uses including: treatment of sunburn, ulcers, gastritis; prevention of prostate conditions, scarring, sunburn. It also protects against the "Coença de Chagas" parasite. Some American and Asian universities are also studying its effect in the treatment of cancer tumors and also AIDs.

The wood from the first thinning is only used for firewood but a commercial value is anticipated from the second thinning at around 8 years. The society has recently forwarded funds for the purchase of a portable saw-mill.



Activities for 2012

For the current year has chosen to balance its carbon footprint, which it has calculated as 477.3 tonnes CO_2e by paying for the planting and maintenance of a combination of commercial timber trees and fruit trees. In order to balance this amount, a total of 1,623 trees will be required.

This is the wife and one of the daughters of Julio Zabalo Rojas, together with Jorge Goitia, ArBolivia's head of forestry. The trees in the foreground are older Palo Maria trees (about 3 years old), with recentlly planted citrus trees in the background.

Participating Smallholders (2012)

The table below shows the details of the planting conducted on behalf of , including the names of the smallholders involved, the parcel codes used to identify each specific lot, the type or purpose of the planting, the species uses and the area planted in each tree lot.

Name Farmer	Code	Type	Specie	Surface
Roberta Marino de Cordova	SCZ-ICH-YAP-1MY-16-S2-P1	Woodlot	Palo maría	0.38
Roberta Marino de Cordova	SCZ-ICH-YAP-1MY-16-S3-P1	Woodlot	Palo maría	0.62
Roberta Marino de Cordova	SCZ-ICH-YAP-1MY-16-S4-P1	Agroforestry	Citrus	0.3
Roberta Marino de Cordova	SCZ-ICH-YAP-1MY-16-S5-P1	Agroforestry	Citrus	0.2
Tomas Rocha Perez	SCZ-ICH-YAP-23M-23-S1-P1r	Woodlot	Palo maria	0.9
Zenobio Sejas Orellana	SCZ-ICH-YAP-FNT-09-S3-P4	Agroforestry	Citrus	1.7
Julio Zabala Rojas	SCZ-ICH-YAP-VAL-36-S1-P5	Woodlot	Palo maría	0.11
			Subtotal	4.21
			Buffer	30%
			Total	

The following table shows the same parcels with details of the number of trees planted, the amount of CO_2e per hectare and the amount of carbon dioxide equivalent sequestered by the number of trees indicated.

Code	Specie	Surface	Nr of trees	CO2e/ha	Total CO2e
SCZ-ICH-YAP-1MY-16-S2-P1	Palo maría	0.38	320	270	102.6
SCZ-ICH-YAP-1MY-16-S3-P1	Palo maría	0.62	520	270	167.4
SCZ-ICH-YAP-1MY-16-S4-P1	Citrus	0.3	120	72	21.45
SCZ-ICH-YAP-1MY-16-S5-P1	Citrus	0.2	80	72	14.3
SCZ-ICH-YAP-23M-23-S1-P1r	Palo maria	0.9	550	270	243
SCZ-ICH-YAP-FNT-09-S3-P4	Citrus	1.7	600	72	121.55
SCZ-ICH-YAP-VAL-36-S1-P5	Palo maría	0.11	200	270	29.7
	Subtotal	4.21	2390		700
	Buffer	30%	717		210
	Total		1673		490

Mandarin orange (*Citrus reticulata*)

Mandarin orange is a variety of orange and also include tangerines cultivars, which have a particular reddish shade of orange although they do not have a separate botanical classification. A satsuma is also seedless variety of mandarin. The mandarin tree may be smaller or equal in size to a standard orange tree, depending on variety. Some may even reach a height of 25 ft (7.5 m) with a greater spread. The tree is usually thorny, with slender twigs, broad-or slender-lanceolate leaves having minute, rounded teeth, and narrowly-winged petioles. The flowers are borne singly or a few together in the leaf axils. Whilst the tree is reasonably drought-tolerant the fruit is less so. It is easily damaged by cold and is therefore grown widely in tropical and sub-tropical areas.

Citrus trees are particularly suited to the Yapacani area, which has a warm tropical climate and is also within reasonably easy reach of markets around Santa Cruz and Cochabamba.

Citrus trees become productive after only 3 years and will maintain their yield for about twenty years. This means that our smallholders will be able to boost their income sooner that would be the case by planting only commercial timber. At that stage the timber species is approaching optimum value.

The trees have a similar value to timber species in sequestering carbon but are far less damaging to the soils than traditional rice crops.