Eligibility

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that the planting area is eligible according to the requirements of CFS.*

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and A summary of the *project area's* history (including its past land-use) must be given.

The project area consists of two adjacent properties covering a total area of 216 ha, located in the remote Northern Zone of Costa Rica, close to the frontier to Nicaragua. The colonization of this region did not begin until the late 19th century and most of the settlements in today's district of Pocosol de San Carlos (Province of Alajuela) were founded after 1954.

Most of the settlers were small farmers emigrating from the main coffee growing area in the Central Valley, seeking for new farmland. The colonization of the Northern Zone was advanced by the construction of a new road between 1940 and 1970 connecting San José, the capital city of Costa Rica, with Villa Quesada, which is now called Ciudad Quesada, the regional capital of the Canton of San Carlos. The most intensive period of colonization and deforestation in this region lasted until the end of the nineteen eighties. In addition to subsistence agriculture, the land was used mainly for extensive cattle ranching for meat and diary production.

Since the end of the 20th century the rapidly increasing demand for pineapple led to the conversion of many cattle ranches and banana plantations in the Northern Zone to more profitable pineapple monocultures. Furthermore, the economic development scheme for the forestry sector in Costa Rica "pagos por servicios ambientales" (environmentally relevant goods and services) starting 1997 enforced the reforestation of pastures, most of them planted with fast growing non-native tree species for industrial timber production, e.g. Gmelina americana, Tectona grandis, Eucalyptus spp.

The project area itself was covered by dense tropical moist forests until it was almost completely clear-cut by the former owner of the properties between 1975 and 1980. Since that time it was used exclusively for extensive cattle ranching for meat and diary production. In 2007 Isla Bosques de Costa Rica S.A., 100 % subsidiary company of BaumInvest GmbH & Co KG, purchased the two properties and started its forest plantation with aprox. 50 % teak (Tectona grandis) and 50 % native tree species (Dipteryx panamensis, Terminalia amazonia, Swietenia macrophylla, Vochysia guatemalensis) in mixed stands.

In September 2007, the UNESCO's Man and the Biosphere Programm recognized great parts of the Northern Zone of Costa Rica including the project area as Biosphere Reserve "Agua y Paz". The BaumInvest Reforestation Project is part of the transition area where sustainable resource management practices are promoted and developed through cooperative programs including the local community and other stakeholders.

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and *Project areas* are only eligible:

a. If the area had not been a forest* 10 years prior to the *project* start or since the 1st of January 1990.
b. If the area is not wetland* or protected area.

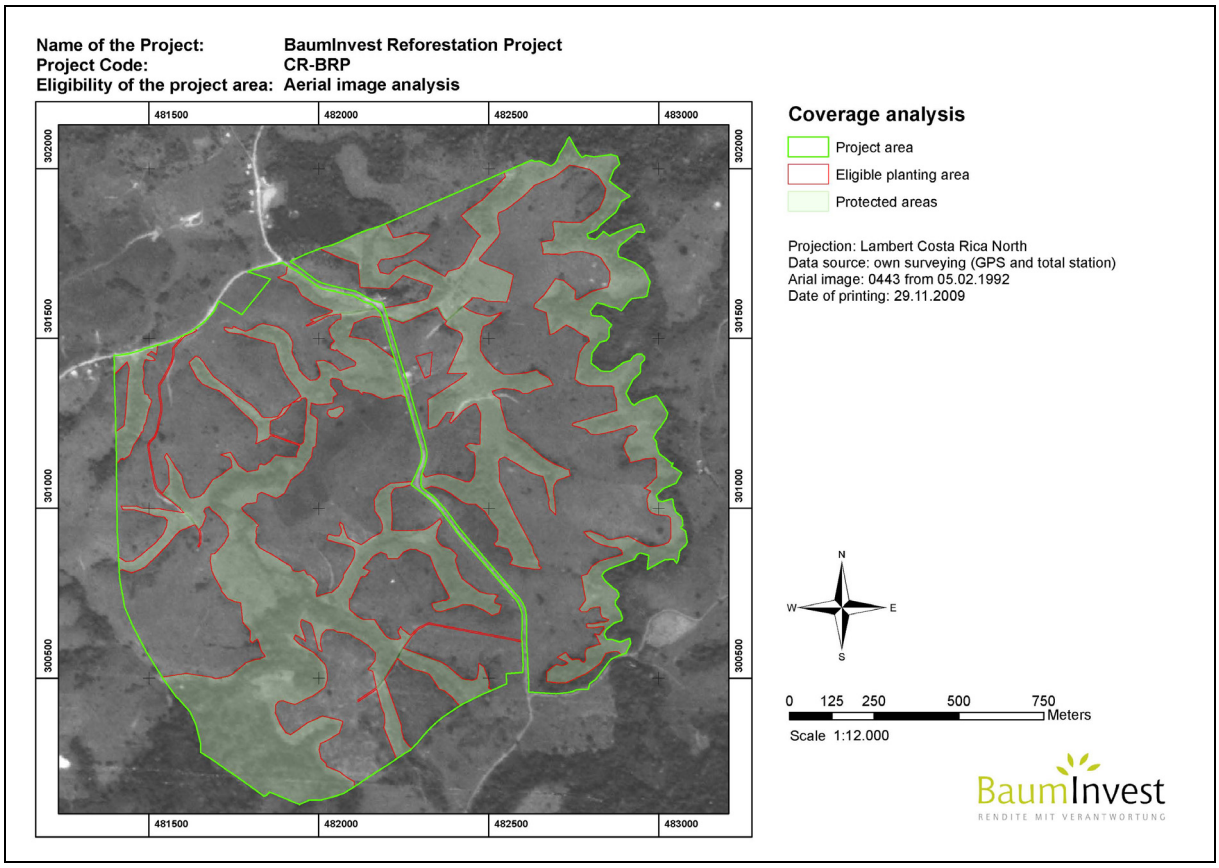
The criteria mentioned above must be proven by groundtruthed* satellite images*, aerial photographs, official maps or land-use records.
* This footnote is only available in the CarbonFix Standard itself.

a. We use aerial photographs to prove that the planting area of the project area was not a forest 10 years prior to the project start in 2007. The aerial image which we refer to (No. 0443) comes from the

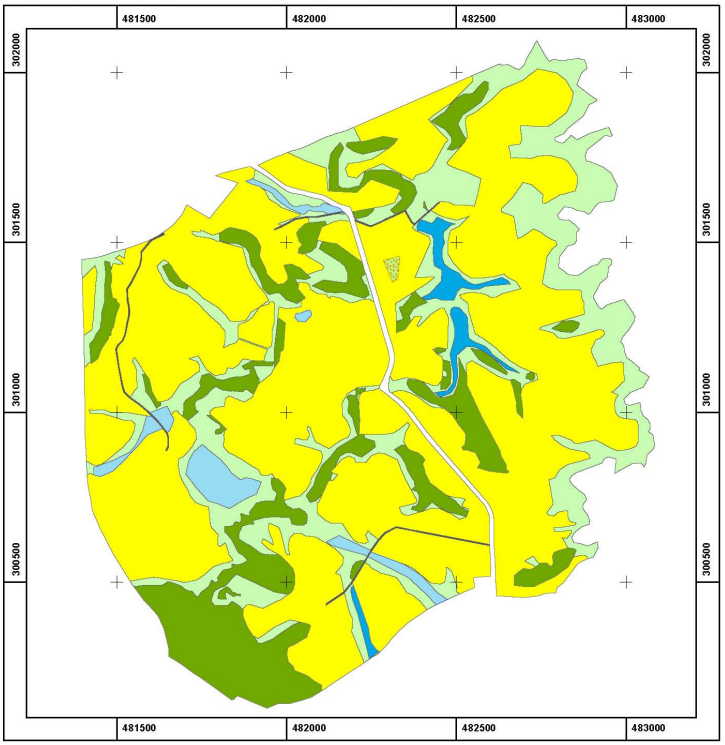
Instituto Geográfico Nacional de Costa Rica and was taken on 5th February 1992 at a scale of 1:60000. The vegetation cover, especially forest, single trees and grassland, can be identified very distinctly on the image. It is evident that the BaumInvest Reforestation Project's planting area was already void of trees in 1992 and is therefore eligible. Remaining forest and wetland areas are non-eligible and constitute a part of the protected areas within the BaumInvest Reforestation Project.

b. The project area is located within the Biosphere Reserve "Agua y Paz" (2007) but is not part of a protected area (see statement MINAET). Biosphere reserves are sites recognized under UNESCO's Man and the Biosphere Programme, which innovate and demonstrate approaches to conservation and sustainable development. It should be noted that a biosphere reserve (a UNESCO term) is not a reserve in the legal sense (although the core area must be reserved for conservation purposes). Biosphere reserve designation does not alter the legal status of the land included within it. Biosphere reserves are not the subject of any treaty or international convention and there are no internationally legally binding requirements on countries or communities regarding their management. Participation by individual landowners in a biosphere reserve is voluntary and the success of a biosphere reserve will depend on the extent to which the local community, local government and associated businesses, organisations and other stakeholders support and involve themselves. The BaumInvest Reforestation Project is part of the transition area where sustainable resource management practices are promoted and developed through cooperative programs involving the local community and other stakeholders (the transition area would in many cases comprise freehold land and may include areas of major human intervention such as farming or urban development).

Wetlands within the project area are excluded from the planting area and will be managed as conservation areas.



Name of the Project: BaumInvest Reforestation Project
Project Code: CR-BRP
Eligibility of the project area: Eligible planting area



Land eligibility

Protected areas
- Natural habitat restoration (non-eligible) [45,7 ha]
- Forest (non-eligible) [29,7 ha]
- Lake (non-eligible) [2,8 ha]
- Wetlands (non-eligible) [4,6 ha]

Road etc. area
- Road
- Nursery

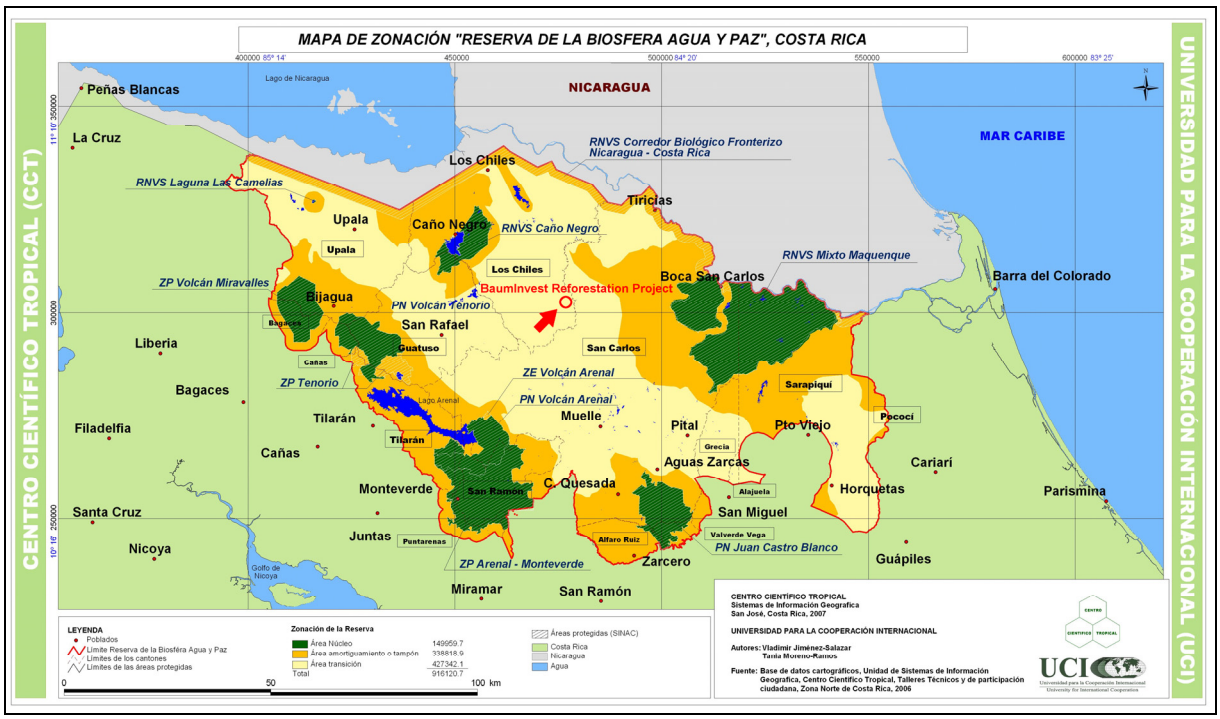
Eligible area
- CR-BRP eligible area [133,5 ha]

Projection: Lambert Costa Rica North
Data source: own surveying (GPS and total station)
Date of printing: 29.11.2009

N
W E
S

0 125 250 500 750 Meters
Scale 1:12.000

BaumInvest
RENDITE MIT VERANTWORTUNG



If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

BRP_Statement_Environmental Authority_MINAET.pdf

This document will be made publicly available. CO_2-buyers will be able to use this information for marketing purposes.

The *projects* activities must lead to a forest according to its host-countries forest definition.

Definition of forest
According to the Designated National Authority (DNA) of COSTA RICA a forest must reach under the in-situ activities all of the following criteria:

- a land area of minimum 1 ha
- a tree crown cover of minimum 30 %
- a mean tree height of minimum 5 m

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

UNFCCC (DNA) Costa Rica Country A/R infos (http://cdm.unfccc.int/DNA/ARDNA.html?CID=53)
CDM_ Designated National Authorities (DNA)_Costa Rica.pdf
CDM_ Designated National Authorities (DNA)_Costa Rica AR.pdf

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or The *project* must establish its forests with trees*.
* This footnote is only available in the CarbonFix Standard itself.

Are all of the species, described in document 'Forest Management', are *trees* according to the definition of the CarbonFix Standard? Yes

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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or The *eligible planting area* must not have been deforested to generate *CO_2-certificates* at a later time.

As already demonstrated with the aerial photograph from 1992, the property was deforested by the previous owner at least 15 years before the start of the project. The previous owner has no connection of any kind with the BaumInvest Reforestation Project. The purpose of the deforestation was to allow extensive cattle grazing. Therefore the possibility of a relationship between the previous usage and the current CO2 certification of the BaumInvest Reforestation Project can be excluded.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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or A *project* is not eligible, if more than 10% of its foreseen *planting area* was agriculture farming land for staple food production* within 5 years prior to the *project* start.
* This footnote is only available in the CarbonFix Standard itself.

The foreseen planting area of the project was used by the former owner exclusively for extensive cattle grazing for meat and diary production within minimum 5 years prior to the project start in 2007. However, meat and diary prodution does not fall under the definition of staple food production of the CarbonFix Standard.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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and In the case that agricultural or silvopasture* activities are implemented in addition to the forestry activities, proof must be given that these will not lead to a long-term* increase of emissions within the carbon pool 'soil'.
* This footnote is only available in the CarbonFix Standard itself.

Are any kind of agricultural or silvopasture activities implemented? Yes

Is so, please give a detailed description:

Agricultural use of the project area is planned only in the form of small-scale agroforestry for subsistence production. The families of employees and local small farmers are given the opportunity to cultivate field crops between the young trees, e.g. maize, beans, yucca and ginger. This type of use is seen as a means of improving the families' ability to provide for themselves and to anchor the project more firmly in the region and with the local population. To date, however, this opportunity to practise small-scale agroforestry on BaumInvest Reforestation Project land has only been taken up by three families on an area comprising less than one hectare of the total area.

Give evidence that these activities will not lead to a long-term increase of emissions within the carbon pool 'soil':

The aim of the BaumInvest Reforestation Project consists primarily in the reforestation of the project area and a sustainable forest management over a long period of time. Small-scale agroforestry between the trees will therefore probably only be possible on a limited part of the project area and for a limited period of time, namely as long as the trees' shadow footprints allow such usage. Under these circumstances it is not to be expected that these activities will lead to a long-term increase of emissions within the carbon pool 'soil'.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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and Any agricultural or silvopasture activities must contribute to the aim of creating a forest.

The agricultural usage of parts of the project area in the form of small-scale agroforestry as subsistence production between the young trees is planned as a means of improving the families' ability to provide for themselves and to anchor the project more firmly in the region and with the local population. This represents in our view an essential precondition for the emerging forest to be able to establish itself as a permanent feature, because the beneficial socio-economic development which may be expected from these activities will significantly reduce the risk of illegal logging and poaching.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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and Areas must have an initial tree stock of at least 500 trees/ha.

On all *management units* more than 500 trees per ha are planted? Yes

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Additionality

Name of the Project: BaumInvest Reforestation Projekt
Project code: CR-BRP

Only this part of the document has to be filled out if your project is CCBS certified.

Please insert the page numbers of the PDD certified and published by the CCBA where the information about the environmental aspects is located:

Pages: e.g. 2-12; 15; 34-37

Sufficient evidence must be given to the certification body to be able to confirm
- *that the project is additional according to the requirements of CFS.*

To prove the addtionality of the project, the *project owner* can choose between the following options:

Option 1 - An official statement of a bank* which gives evidence that the *project* would not be feasible without the additional financial means from the sale of $VER_{futures}$. The statement must be based on realistic cash-flows which are attachments of this document.
* This footnote is only available in the CarbonFix Standard itself.

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and ***Option 2*** - An analysis of 'Additionality' according to the UNFCCC guideline. GUIDELINE: Additionality

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Which option is selected? **Option 2**

If you have selected
- 'Option 1', please state the name of reference documents.
- 'Option 2', please describe your additionality.

Step 0: Preliminary screening based on the starting date of the A/R project activity

According to the guideline ("Additionality") for the demonstration and assessment of additionality in A/R CDM project activities modified by the CarbonFix Standard (v2.0), Step 0 is not required.

Step 1: Identification of alternative scenarios consistent with the current laws and regulations

Sub-step 1a: Define alternatives to the project activity

Continuation of the pre-project land use

Prior to the commencement of the project the land was used for extensive cattle grazing for meat and dairy production. According to the previous owner, he himself cleared the land approximately 35 years ago in order to open it up for grazing livestock. His age and health problems prevented him from continuing with the farming operation himself, and his children were not interested in taking it over. Instead, they wished to use money accruing from the sale of the livestock and the finca to set themselves up for an urban way of life. Meat and dairy prices have fallen off recently, whereas property values have increased enormously over the last 5 years. Therefore the prospect of a new owner continuing the previous type of husbandry seems unlikely in view of the high cost of

acquiring the land and the relatively low yield to be expected from the sale of meat and dairy products. On the other hand a prolongation of the preceding land use would have been quite conceivable if the owner had employed an estate manager or leased the grazing areas to other cattle farmers so as to provide for his family with the resulting income.

Afforestation / reforestation of the land within the project boundary performed without being registered as an A/R CDM project activity

In the short term, and indeed in the medium term, an operation such as the BaumInvest Reforestation Project cannot provide a realistic land use alternative for the project area without VER certificates or comparable financial incentives. There is a considerable number of reforestation projects in the region, but these consist primarily of conventionally managed monocultures involving fast growing exotic species (teak, gmelina, eucalyptus etc.). However, these reforestation projects have been subsidised by the State of Costa Rica since 1997 by means of environmental service payments, so-called *Pagos por Servicios Ambientals* (PSA) in order to guarantee national timber supplies.

Nevertheless, in spite of the state subsidies the annual rate of reforestation in Costa Rica has fallen by more than 50% since 1996 (Barrantes y Salazar, 2007). For this reason the subsidy for reforestation was significantly increased to 816 US$ per hectare in 2005. The subsidy is spread over 5 years and paid out as follows: year 1: 50 % / year 2: 20 % / year 3: 15 % / year 4: 10 % / year 5: 5 %. However, even after this increase in the financial incentives on the part of the Fondo Nacional de Financiamiento Forestal (FONAFIFO), only about half of the funds deployed for 'Reforestación' were drawn on in the past three years (2006 – 2008). Competing forms of land use have been put forward by way of explanation for the dramatic downturn in the reforestation operations despite the state subsidies. This refers especially to pineapple plantations and to some extent to cattle ranching, which are either more profitable or less encumbered with rules and regulations than is the case with forestation, or both (ONF, 2006). In a further attempt to ensure that the already perceptible shortage of timber does not increase still further, the Costa Rican government significantly raised the subsidy once again (whilst maintaining the same payment procedure), so that the sum involved at present is 980 US$ per hectare.

A crucial aspect of this state subsidy in the form of PSA consists in the fact that, when it is granted, the rights pertaining to the lowering, avoidance or containment of greenhouse gases must be ceded to the responsible authority, the FONAFIFO for the term of the subsidy! As such, this state subsidy can be regarded as being equivalent to the yield arising from certification and the sale of CO2 certificates. In practical terms this means that there are de facto no (private) reforestation projects in Costa Rica without financial investment assistance which is directly connected with CO2 containment (yield from the sale of VER certificates or PSA). This is also confirmed in a report on the state of the nation published in 2006 (Programa Estado de la Nación en Desarrollo Humano Sostenible, PENDHS), which reveals that between 1997 and 2005 practically no reforestation projects were realised using entirely private funding '*plantaciones con recursos propios*' (see Cuadro 1).

Cuadro 1. Demanda por contratos para PSA por modalidad desde 1997 hasta 2005 (PENDHS 2006).

	Modalidad				
Año	Protección de bosque	Manejo de bosque	Reforestación	Plantaciones con recursos propios	**Total**
1997	88,829.8	9,324.5	4,629.4	0.0	102,783.7
1998	47,803.8	7,620.4	4,172.5	319.0	59,915.7
1999	55,776.0	5,124.8	3,156.0	724.1	64,780.9
2000	26,583.2	0.0	2,456.8	0.0	29,040.0
2001	20,629.0	3,997.0	3,281.0	0.0	27,907.0
2002	21,818.9	1,999.2	1,085.5	0.0	24,903.6
2003	65,405.0	0.0	3,155.0	204.8	68,764.8
2004	71,081.0	0.0	1,557.0	0.0	72,638.0
2005	53,493.0	0.0	3,602.0	0.0	57,095.0
Total	451,419.7	28,065.9	27,095.2	1,247.9	507,828.7

From this it may be concluded that essentially any reforestation project in Costa Rica must be 'additional', because none of them appear to be able to compete with other land use alternatives. However, BaumInvest has deliberately refrained from applying for this state subsidy because it has already guaranteed the use of the CO2 rights which apply to the project to the founding investors and limited partners, some of whom wish to purchase them to offset their own CO2 emissions.

Other plausible and credible land-use alternatives to the project activity deemed appropriate with respect to location, size, funds, expertise requirements, etc.

The most probable 'plausible and credible land-use alternative' in Costa Rica's *Zona Norte* is the cultivation of pineapples, which in recent years has shown the fastest growth rates. Pineapple growing in Costa Rica has been booming for many years and since 2000 the rate of increase has been a steady 15 – 20 % per year. Between 2000 and 2009 the plantation area has increased more than five-fold from 9,900 ha to around 50,000 ha (MAG, 2009). The *Region Huetar Norte*, which also contains the BaumInvest Reforestation Project, is the region with the highest rate of increase. Only between 2004 and 2005 the plantation area increased by 25.5% in this region (CANAPEP). In 2007, 98 % of all small and medium sized producers were to be found in the *Region Huetar Norte* (MAG, 2007). Pineapples are cultivated mainly for the export of fresh fruits and various pineapple-related products and their sale represents one of Costa Rica's most important sources of foreign exchange. In 2008 alone export income increased by 20.1% to 644 mill. US$ compared with the previous year (SIIM, 2009). During the same period, Costa Rica had to pay 18 mill. US$ more for imported timber than it earned through the timber exports (PROCOMER, 2009). This comparison provides further confirmation of the fact that forestry in Costa Rica is practically unable to compete with other forms of land use at the present time, as does a case study carried out by Barrantes et. al. (2004) in which the profitability (mean net yield per hectare and year) of various land use alternatives in the 'Corridor Biológico San Juan - La Selva' in northern Costa Rica was investigated. Pineapple cultivation proved to be most profitable by a long margin (3,092.05 US$/ha/year), whereas forestry provided the poorest returns (9.23 US$/ha/year).

Step 2: Investment analysis

Sub-step 2a: Determine appropriate analysis method

The **benchmark analysis (Option III)** is applied to demonstrate the additionality of the project activity.

Sub-step 2b – Option III: Apply benchmark analysis

The **financial indicator** we identified as most suitable for the project type and decision context is the Internal Rate of Return (IRR). Accordingly, the relevant **benchmark value** is the Required Rate of Return (RRR).

Sub-step 2c: Calculation and comparison of financial indicators

The basis for the calculation of the IRR of the BaumInvest Reforestation Project is the cash-flow forecast contained in BaumInvest's official investment prospectus. Using this data we have determined an Internal Rate of Return after 22 years of 5.96% pa. (after tax) without sales of $VER_{futures}$.

In view of the comparatively long term of the investment (22 years, commencement of profit sharing only after 15 years) and the potential risks (e.g. growth rates, timber prices and natural hazards) including the possibility of total loss, the yield of 5.96 % pa. (after tax) for an entrepreneurial investment occupies the extreme lower end of the profitability scale. In our judgment the benchmark for such an entrepreneurial investment must be at least 7% pa. (after tax) in order to be financially attractive for investors (see Table 1). As investments with a risk-free basic interest rate for 20-year terms are not available for comparison, we have based our calculation on government bonds issued by the German Federal Bank with a 7 year term. The average returns from these bonds over recent years have been around 3.5 – 4% before tax.

It is theoretically possible to perform risk assessment with the aid of beta factors, but such parameters cannot be determined for reforestation operations. In common company assessment procedures, risks are calculated by adding amounts to the discount factor for the expected term. In our experience the market demands between 4% and 12% surcharge on the risk-free interest rate, whereby the lowest rate applies to low-risk entrepreneurial investments and the highest rate only to highly speculative investments. In our view the appropriate figure for BaumInvest is in the upper third section of the band, i.e. around 8 - 10%.

Table 1 Assumptions made for the calculation of the benchmark

1. Risk-free interest for a 20 year term	4%
2. Risk surcharge for entrepreneurial risk of the investment	8%
3. Expected interest rate before profits tax: risk-free interest (1) + risk surcharge (2)	12%
4. Profits tax (marginal tax rate: 42 %)	5%
5. Yield expectation after tax: expected interest rate (3) less profits tax (4)	**7%**

This leads to a required rate of return (RRR) of at least 7% pa. (after tax) as a benchmark for the project activity. However, the BaumInvest Reforestation Project calculations forecast an Internal Rate of Return of only 5.96% pa. (after tax).

Therefore the BaumInvest Reforestation Project (without the sales of $VER_{futures}$) cannot be considered as being financially attractive.

Sub-step 2d: Sensitivity analysis

The expected (financial/economic) revenues of the BaumInvest Reforestation Project depend on three basic factors: 1) The US$ exchange rate, 2) the biological growth rates of the trees (= timber harvesting quantities, i.e. volume of merchantable wood) and 3) the annual increase in wood prices. The forecast in our investment prospectus is based on an exchange rate of 1.20 US$ to the euro. The volume of merchantable wood was estimated at 190 m3/ha (final harvest after 20 years), and we assumed an annual rate of increase in wood prices of 2%. Should these basic parameters develop differently, the resulting revenues may improve (best case) or worsen (worst case). For the purposes of the sensitivity analysis we have represented the possible variation in terms of critical assumptions in Table 2.

Table 2: Range of critical assumptions

	Best case	**Average case (forecast)**	Worst case
1. Exchange rate US$ / €	1.10 US$	**1.20 US$**	1.30 US$
2. Volume of merchantable wood	120%	**100%**	80%
3. Annual increase in wood prices	4%	**2%**	0%
4. Internal Rate of Return	11.49%	**7.17%**	2.30%
5. Internal Rate of Return after tax*	9.95%	**5.96%**	1.77%

* maximum marginal tax rate 44.31% income tax with solidarity surcharge ('Solidaritätszuschlag').

A comparison with the expected future development of the relevant benchmark values is not necessary, because the investment decision for participating in the closed-end BaumInvest fund is limited to the period from September 2007 until the end of December 2009 at the latest. Therefore the comparison with the current values shown in Table 1 is sufficient.

Assuming the best case scenario with an internal rate of return of 9.95% (after tax) compared with the benchmark value of 7% (RRR after tax), it would appear that the project could prove to be financially attractive even without sales of $VER_{futures}$. However, the figure of 1.77% (IRR after tax) underlines that the investment is not without risk. In our opinion, therefore, the sensitivity analysis also supports the assumption that the proposed project activity is **unlikely** to be financially attractive without sales of $VER_{futures}$.

Step 3: Barrier analysis

Sub-step 3a: Identify barriers that would prevent the implementation of type of the proposed project activity

Investment barrier: Many of BaumInvest's investors, especially the founding investors, would have little motivation to engage in this financial participation without the additional factor of making a concrete contribution towards climate protection.

The ecological and social co-benefits of the project activity, especially the contribution towards climate protection through carbon sequestration in trees, play a paramount role in respect of any investment decision for the BaumInvest Reforestation Project. For this reason many of our investors are prepared to accept relatively low returns despite the long term of the investment and the risks involved in this case.

The contribution which BaumInvest's reforestation project can make towards climate protection, as well as its certification, was communicated to potential investors as being an essential component of the project right from the beginning. The "marketing of the CO2-certificates which are to be applied for" and their use for "voluntary compensation of shareholders' own CO2 emissions" are expressly stated in BaumInvest's investment prospectus as presented to the German Federal Financial Supervisory Authority (BaFin) on 12 September 2007 (pages 10 and 24). As at this point in time it was not clear what standards for the certification would be required and what revenues from the sale of certificates were to be expected, we considered it to be irresponsible to take potential revenues into consideration in the financial forecast. For this reason BaumInvest took care only to refer to "possible extra revenues". The publicity brochure published in October 2007 also contains repeated references to the "contribution towards climate protection", the "voluntary CO2 compensation", "possible additional revenues through … CO2 certificates" and the intention to "apply for certification of the CO2 sequestration potential". Page 28 contains the following passage: "*Reforestation for voluntary CO2 compensation: BaumInvest will have the sequestration potential of its reforestation project certified. In this way, BaumInvest provides private individuals and companies with a means of neutralising their own CO2 emissions through participation in the investment scheme."*

Thus the primary benefits accruing from the CO2 certification of the BaumInvest scheme are not of a purely financial nature: The main advantage/added value consists in the ethical gains for climate protection through CO2 compensation. Companies can achieve CO2 neutrality for their production, individual products or services, and private individuals can improve their personal 'climate balance' by reducing their carbon footprint. In this respect certification according to the CarbonFix standard serves as a concrete proof of the CO2 sequestration potential of the trees planted and to provide unequivocal documentation in a suitable registry.

The aspect of climate protection together with the prospect of being able to offset these benefits against actual CO2 emissions to improve the CO2 balance of participating companies, their products or their services constituted a major part of the motivation to participate in the reforestation project, especially for the founding investors of BaumInvest (ethical motivation, CSR project). Only with their investment was it at all possible to commence with the project and tackle the uncertainties of the start-up. Without the prospect of subsequent CO2 certification for the project they would probably not have been prepared to undertake the investment and the BaumInvest Reforestation Project would very likely not have come into existence.

Specific examples: The **bio verlag** wishes to compensate the CO2 which is released through the production and dispatching of the magazine **Schrot&Korn** and regards new forests as one of the few genuine CO2 sinks. The publishing house wishes to help establish a new method of CO2 compensation (see article on the company website: 'Schrot&Korn: CO2-neutralisiert', as well as the Schrot&Korn issues for December 2008 and November 2009). **Stark Druck GmbH & Co KG**, a leading German enterprise in the printed media sector, states its own aims as founding investor of BaumInvest in terms of "providing a counterbalance for our CO2 emissions" (see article on company website: 'Stark für die Umwelt') and "providing its customers with a way of achieving CO2 neutral printing through the BaumInvest reforestation project", as Hans-Joachim Heer puts it in

BaumInvest's publicity brochure. The mountaineering equipment provider **VAUDE** also wishes to "make an active contribution towards CO2 compensation" through its participation as founding investor (see text on the company website: 'Umweltschutz bei Entwicklung und Produktion'. The tour operator **avenTOURa GmbH** intends to ensure that the air travel which it organises remains climate neutral through its participation in BaumInvest as founding investor (see article in the companies newsletter No. 7/2008).

So it is clear that for the founding investors as well as for most of BaumInvest's private investors the investment decision has not been taken for purely financial reasons, but also or indeed primarily on account of the project's ecological and social sustainability together with its potential for climate protection through CO2 sequestration. This essential characteristic is also independent of the prospect of additional revenues being generated and earlier returns arising from the sale of the certificates.

The importance of climate protection and the CO2 certification has also been confirmed time and again in the course of talks with our customers.

Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives.

The most likely alternative to the proposed project activity is the cultivation of pineapples. As has already been explained in Sub-step 1a, pineapple plantations are much more profitable as well as being less risky, and the investment terms are much shorter. Therefore the investment barrier of the proposed project activity identified in Sub-step 3a would not prevent the implementation of the alternative.

Step 4: Impact of registration

The proposed project activity faces the problem that timber sales alone will generate a relatively low IRR. In this case BaumInvest estimates an IRR of 5.96 % (after tax). Taking into account viable land-use alternatives, such as pineapple plantations with risks much lower than those occurring in reforestation projects, it would not be possible to attract the necessary financial backing to implement the proposed project activity.

The approval and certification of the proposed project activity under the CarbonFix Standard is crucial for the implementation of the BaumInvest Reforestation Project, both in terms of financial indicators as well as investment barriers. According to the assumptions made for the calculation of the costs and returns of the certification (see Table 3), the sales of $VER_{futures}$ will significantly raise the IRR of the project activity to 7.78% pa. (before tax) (6.57% pa. after tax).

This will have the effect of exceeding two key economic threshold levels: The profitability before tax (just less than 8%) thereby becomes reasonably comparable with normal market expectations and the profitability after tax lies comfortably above the psychologically significant level of 6%. Also, the revenues from the sales of $VER_{futures}$ will enable us to pay dividends to our investors within the first five years, and not only after 15 years as would otherwise be the case.

Far more important than the purely economic aspects, however, is the fact that with the proven and transparent certification of the CO2 fixing potential of the BaumInvest Reforestation Project we can fulfil the special expectations and requirements of our investors in respect of climate protection.

Table 3 Assumptions made for the calculation of the costs and returns of $VER_{futures}$

$VER_{futures}$ available for sale (t CO_2) – current planting area of the project (112 ha)	18,621
$VER_{futures}$ available for sale (t CO_2) – total planting area of the project (450 ha) according to the official BaumInvest sales brochure	80,000
Sales price of 1 VER_{future} (€ / t CO2) *	15
Total revenues from $VER_{futures}$ sales (€)	1,200,000
Total costs for the certification process including CarbonFix fees, sales and marketing	300,000

* An initial preliminary contract of sale for 1,000 $VER_{futures}$ at a net price of 17.65 € has already been concluded.

With the fulfilment of Step 4, the additionality of the proposed reforestation project activity is proven.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

BRP_Calculation_IRR_without_sales_of_VERfutur
BRP_Calculation_increased_IRR_with_sales_of_VERfutur

BaumInvest documents:
- BaumInvest investment prospectus
- BaumInvest publicity brochure

BaumInvest founding investors:
- aventoura_newsletter 7-2008
- bioverlag_Schrot+Korn website
- bioverlag_Schrot+Korn_11-2009
- bioverlag_Schrot+Korn_12-2008
- Stark Druck_website
- VAUDE_website

A responsible state authority must approve that the forestation on the *planting area* is not mandatory by any law or regulation **or** if it is mandatory evidence must be given that these laws or regulations are not systematically enforced.

Name of the reference document:

BRP_Statement_Environmental Authority_MINAET.pdf

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or Without the *project* activities, a forest must not be able to establish itself on the *planting area*.

The current land use practice of cattle grazing and its potential alternative of pineapple plantations inhibit the establishment of a forest by means of natural regeneration.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

If parts of the *project* are planted without generating $VER_{futures}$ (e.g. because the land is not eligible), it must be assured that the additionality of the entire project remains valid.

No part of the project area is beeing planted without generating VERfutures. Reforestation of conservation forests in the protected areas should be subject to certification later.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Forest Management

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that the project bases itself on the principles of sustainable forest management.*

Management Objectives

The objectives of the *project* must be described.

The BaumInvest Reforestation Project´s objectives are:

- restoring forest landscapes in Costa Rica with native tree species in mixed stands and teak
- managing forests sustainably with the aim of producing high quality precious woods for national and international markets
- mitigating global warming and climate change by means of long-term carbon sequestration in trees and regrowing forests
- contributing to sustainable socio-economic development and poverty reduction through long-term employment in rural areas of Costa Rica
- protecting biodiversity through the conservation of natural habitats and enhancing habitat connectivity

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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and The following key figures must be given:

a. Area (ha) of the *project area*
b. Area (ha) of foreseen *planting area*
c. Area (ha) of foreseen *eligible planting area*
d. Area (ha) of *nature conservation area*

a. 216 ha
b. 134 ha – planted up to the year 2009

c. 134 ha
d. 82 ha

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- CR-BRP_-_Attachment_-_eligible planting area_Map.pdf
- CR-BRP_-_Attachment_-_project area_Map.pdf

Management of Nature Conservation Area

For the *nature conservation area(s)* a description of the selected IUCN management category(ies) and its (their) implementation must be given. One or several of the following categories can be selected: I, II, III, IV or V - see guideline 'IUCN categories'. GUIDELINE: IUCNcategories

The *nature conservation area* can consist of different ecosystems (wetland, grassland, etc.).

Which category has been selected? I – Strict Nature Reserve / Wilderness Area and No other category

Give a short description of the category(ies) selected:

For the management of BaumInvest's nature conservation areas IUCN-Category I – Strict Nature Reserve / Wilderness Area was selected. The BaumInvest Reforestation Project aims to improve biodiversity and ecosystem functionality through the management and conservation of natural habitats.

Describe how you will implement this type of management:

About 35 % of the project area of the BaumInvest Reforestation Project has been designated as nature conservation areas. These represent integral constituents of our admininistration plan and will be managed as 'Strict Nature Reserves'. These areas include secondary forests, wetlands and areas of natural habitat restoration.

Especially in the so-called quebradas (small valleys) and along the waterways, secondary forests in the form of riparian forests have been preserved within the project area. By protecting these locations from human intervention and disturbance, the vegetation there can regenerate itself undisturbed. Important seed disseminators such as monkeys, birds and bats are represented in the project area in sufficient numbers to provide a natural means of increasing species

diversity, not least through importing seeds from outside the project area. The large number of young saplings of various tree species indicates a high degree of natural regeneration potential, so that these areas will receive as little management as necessary.

Within the scope of the nature protection management further measures will be adopted to restore certain areas of the former grazing land, such as riverbanks, with autochthonous, site-adapted trees. Where it is necessary, the dense, bushy vegetation known as charral, which presents a major hindrance to natural regeneration, will be thinned out so as to be able to accelerate the development of secondary forests by means of enrichment planting. This measure provides an opportunity to give preference to regional species which used to be present, but are now very rare or have disappeared altogether, as well as to fruit trees which provide an important source of food for various animal species. An example for this is to be found in the Central American mountain almond or 'Almendro' (Dipteryx panamensis), the almond-like fruits of which are essential to the survival of the endangered Great Green Macaw (Ara ambiguus) in northern Costa Rica. Furthermore, separated fragments of forest will be reconnected with each other in order to create biological corridors for wild plants and animals. These biological corridors serve to improve the exchange of genetic material between individual populations. As a result, populations become larger, more stable and therefore more able to sustain themselves in the long term.

The waterways and wetlands of the project area also comprise part of the nature conservation areas and have been placed under special protection. The measures adopted to protect these areas include in the main the reforestation of the land bordering the bodies of water to combat erosion and, where necessary, the suppression of invasive species such as Heteranthera reniformis and Pteridium aracnoideum.

In order to assess the effectiveness of the nature protection measures, we have started a long-term monitoring programme in cooperation with the Senckenberg Research Institute and Natural History Museum in Frankfurt am Main with the aim of observing the constitution and development of amphibian and reptile species in the project area over a long period. Amphibians and reptiles react very sensitively to environmental influences and changes in their environments, which renders them particularly suitable as indicators for the assessment of habitats from an ecological point of view.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

BRP_Monitoring of Amphibians and Reptiles_interim report_2009.pdf

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Management of Planting Area

and The following characteristics of the tree species planted must be described:

a. Origin and distribution of the tree species (indicate if the species are native or not)
b. Provenance of the seeds
c. Main purpose / use of trees
d. Possible pests and diseases
e. Time when forest products are foreseen to be used

	Name (English, Latin and if possible local language)	Origin and distribution	Provenance	Main purpose / Use of trees	Possible pests and diseases	Time of use
1	Teak, Tectona grandis, Teca	Non-native South-East Asia	Hojancha - Guanacaste, Costa Rica	Carbon sequestration and timber production. Wood used for premium furniture, ship-building, cabinets and boarding.	Generally relatively stable against biotic and abiotic pests and diseases. Bacterial or viral infections are extremly seldom. Problems might be caused by insects such as Xyleutes ceramicus and fungi such as Armillaria mellea, Fomes lignosus, Fomes noxius, Heterobasidium compactum, Irpex flavus, Nectria-Arten, Olivea tectonae ('teak leaf rust'), Peniophora rhizomorpha ('yellow laminated rot'), und Polyporus zonalis ('white pocket rot').	year 20 after planting
2	Big Leaf Mahogany, Swietenia macrophylla, Caoba	Native Central and South America	Sarapiquí - Heredia, Costa Rica	Carbon sequestration and timber production. Wood used for premium wood products.	The most serious pest threatening S. macrophylla is the seedling shoot borer (Hypsipyla grandella)	year 20 - 22 after planting
3	Mountain Almond, Dipteryx panamensis, Almendro	Native Central America	Sarapiquí - Heredia, Costa Rica	Carbon sequestration and timber production. Wood can be used for industrial floors, veneer, bridges, railway sleepers, marine construction in waters infested with marine borers, boats, oxcarts,	not specified	year 20 - 22 after planting

				handicrafts, sport implements, springboards, industrial machinery and agricultural tool handles.		
4	Terminalia amazonia, Roble Coral	Native Central and South America	Horquetas de Sarapiquí - Heredia, Costa Rica	Carbon sequestration and timber production. Wood is used in heavy general construction, interior and exterior construction, cabinetwork, floors, bridge foundations, beams, fences, veneers, parquet, barrels, railway sleepers and ships.	Only a few insect or disease problems have been reported, such as borer attacks from Larvae of the genus Cossula, moderate defoliation damage to plantation trees from Exophthalmus spp.; attacks by leaf-cutting ants and unidentified fungi have been observed (FAO).	year 20 after planting
5	Vochysia guatemalensis, Cebo	Native Central America	Horquetas de Sarapiquí - Heredia, Costa Rica	Carbon sequestration and timber production. Wood used for boxes, cabinetwork.	No severe pests or disease have been reported. Problems might be caused by insects such as Lagocheirus araneiformis L., Crematogaster sp., Oechophoridae, Lepidoptera (Solis)	year 8 - 12 after planting

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- Tropical Tree Seed Manual_D. panamensis.pdf
- Tropical Tree Seed Manual_S. macrophylla.pdf
- Tropical Tree Seed Manual_T. amazonia.pdf
- Tropical Tree Seed Manual_T. grandis.pdf
- Tropical Tree Seed Manual_V. guatemalensis.pdf

The following steps of the *projects* technical implementation must be described:

a. Nursery
b. Land preparation (incl. lining out / spacing)
c. Planting
d. Beating up (replacing of the seedlings)
e. Maintenance
f. Pruning
g. Thinning
h. Harvesting

If Standard Operational Procedures (SOPs) exist for the *project* describing the technical procedures, these can be uploaded as attachment. In this case, no additional description is required.

Do Standard Operational Procedures exist for the *project*? No

If so, state the title of the document(s):

If not, please describe in detail the techniques of implementation:

Nursery

Seedlings are obtained from BaumInvest's own nursery which is located directly on the project area to adapt the saplings to the site conditions best possible and to reduce the risks of long distance transportation. The nursery is managed by our contractor 'Viveros y Plantaciones forestales HERPA Sociedad de Responsabilidad Limitada' (HERPA), with Manuel Hernandez as managing director, who has roundly 30 years of working experience with the cultivation of high quality seedlings of different tree species in Costa Rica. Seedlings are cultivated from seeds only. Preference is given to seeds from local origin. Seed material is obtained mainly from the CACH (Centro Agricola de Hojancha). The following techniques are being applied in our nursery:

- Pre-treatment of the seeds to enhance germination with specific procedures for each tree species.
- Sowing of the seeds into germination beds or directly into black polythene bags - depending on the requirements of each tree species.
- Sorting and transplanting of the seedlings into black polythene bags. The bags are prior filled with a mixture of sieved topsoil, rice husks and organic fertilizer (compost). Moderate shadowing protects the seedlings against direct sunlight.
- Manual Weeding and watering is applied when necessary.
- Phytosanitary controls are executed regularly to prevent pests and disease.

Land preparation

It is necessary to prepare the soil of the planting area to create suitable conditions for tree growth. Traditionally in Central America, sites to be planted are usually slashed and burned, followed by overall tillage. This results in carbon dioxide being released into the atmosphere as an immediate consequence of the burning, along with emissions of non-CO2 GHGs. Furthermore, on slopes where intensive tilling is conducted, severe soil erosion due to precipitation effects is to be

expected. This management practice results in loss of significant amounts of organic matter and nutrients, causing site degradation. To prevent soil erosion, reduce GHG emission and protect existing carbon stocks, site burning is not carried out at all on the site. However, the planting areas were previously used as grazing land, which has caused significant soil compaction and nutrient degradation. Generally, the basic site conditions are not suitable for the establishment of trees. Ploughing is therefore necessary to relieve soil compaction and to create soil conditions that enable the establishment of trees. Ploughing is carried out using plough and harrow. Ploughing is employed to the smallest possible degree as a matter of principle. Area-wide ploughing is avoided to lower the erosion and carbon emission impact. Ploughing is limited to flattish areas, which feature mainly flat hump tops without significant erosion risks. No ploughing is ever carried out on or close to major slopes. To facilitate future management measures, tracks have been reconditioned to allow for stand management with minimal impact on soil and adjacent trees. All management units are imported into the GIS database. Lining is conducted using a rope line and measurement equipment. The lines connect reference points that are marked with poles. Distancing is modified according to the respective spacing schemes.

The spacing structure varies as follows:

- Spacing is 4m*4m for teak stands with mixed eco-groups of D. panamensis and T. amazonia respectively.
- Spacing is 4m*4m for pure teak stands.
- Spacing is 6.8m*6.8m (for mahogany?) with the spaces occupied alternately with one T. amazonia or D. panamensis respectively. Thus the distance between a given mahogany tree and the adjacent tree is 3.4m.

Mixed species stands have been established to minimize risks and to maximise ecological benefits. Spacing schemes are illustrated in the attachment 'BRP_Forest_Management_spacing schemes'.

Planting

No planting is carried out in the dry season. Planting is done manually. Planting holes are drilled with an auger. Seedlings are watered before transporting them onto the field. Seedlings are put into the pit and covered with the extracted soil using light pressure. Bokashi fertilizer is buried around the seedling in a concentration of approximately 2-3 kg per tree. No pesticides are applied to the seedlings.
The quality of the planting is checked on a daily basis.

Beating up

In case of seedling-failure, replanting is carried out as soon as possible, usually immediately. If significant numbers of seedlings show defects, the causes will be analysed. After elimination of the cause of planting failure (e.g. wrong species for specific site, bad seed material etc.), restocking will be carried out. Weeds surrounding the seedlings will be slashed manually three times a year as necessary to ensure high survival rates and good growth in the first 4 years after planting. For ecological and social reasons labour intensive, i.e. employment-friendly, manual weeding is given preference to the use of herbicides. While slashing weeds, the trees are also inspected in respect of their state of health and good growth.

Maintenance

Detailed maintenance plans include monitoring the growth and state of health of the seedlings/trees (in the first three months on a weekly base; after that, monthly), maintenance of roads, verges and tracks (at least three times a year), boundary control and repair (at least three times a year), maintenance of drainage channels to secure tracks (at least three times a year), maintenance of fire protection boundaries (at least twice a year) and erosion control (monthly). Manual slashing of weeds to support the trees' growth is carried out every 3 weeks in the first 8 months after planting on areas that have been previously ploughed. On other areas, slashing is done every 6 weeks. Lombricultura compost is applied in concentrations of around 2-3 kg per tree as a measure to reduce soil acidity.

Pruning

No detailed pruning management plan has been developed yet, but pruning is seen as a necessary measure to ensure the development of valuable wood. Pruning will be conducted from the bottom of the trunk upwards. The pruning height will be determined by (i) the height of the high quality zone of the trunk (ii) the position of the first major branch (where the risk of branch removal for tree health is not compensated by an increase in wood value) and (iii) by the maximum height to which pruning can be conducted in an economic way. The goal of pruning is to produce high quality wood with as little 'knotty' wood as possible in lower logs (2/3 branch free diameter and at most 1/3 core with juvenile wood). This can, as a rule, be converted into 50% branch free (pruned stem volume) lumber at the wood processing stage.

Early pruning is advisable particularly in teak. Pruning is to be achieved in several 'lifts' beginning with the removal of unwanted side branches in young trees in the first six years. Certain flexibility should be allowed for pruning with the objective of leaving at least the first 8 m of the bole free of branches and knotty wood on best commercial trees. Lifts of up to 8, 10 or 15 m on best trees must be examined from the practical and economic perspectives. Pruning in young trees with small branches up to 2 cm diameter is executed with hand pruners or pruning shears, larger branches are pruned with pruning saws (no chainsaws).

Thinning

Thinning will be carried out to maximise added value per unit area. The aims of thinning operations include (i) maximizing the porportion of high quality trees (ii) maximizing individual diameters of high quality trees, (iii) maximizing single tree and stand stability. To maximise the positive effects of thinning, several separate operations involving moderate quantums of removed volume in each case will be carried out. The scheduling and intensity of thinning operations will be coordinated with the effective single tree growth and stand growth. Thinning will commence as soon as the crown expansion of individual trees begins to interfere with the crown expansion of surrounding trees of the same vitality. Thus the first thinning will be carried out at the moment of crown closure. Thinning will be conducted in such a way that high potential trees will benefit, while low potential trees will be removed as a matter of preference. To achieve this goal, a careful selection process will be integrated into the thinning procedures by which high-potential trees and their respective competitors are marked. The positive potential of trees is evaluated using the criteria quality, vitality and spatial distribution. Quality is determined by parameters such as diameter, stem damage, taper, stem evenness, number and diameter of branches, stem eccentricity and spiral growth. Vitality is to be determined on the basis of parameters such as tree diameter, crown percent, number of dead branches, stem damage, pest damage and foliation. The volume of wood removed should be high enough to promote crown expansion amongst the remaining trees, thus increasing individual tree stability as well as stand stability. Thinning will be orientated on single tree assessment or small-scale assessment respectively.

Guidelines for thinning have been elaborated for teak. BaumInvest anticipates that thinning of teak stocks will to be carried out at the ages of approximately 7, 12 and 16 years with removal volumes of approximately 40, 30 and 50 cubic meters respectively. For native species, the thinning age and removal volumes will be adapted according to the stand growth development. Workers will be trained to perform felling in a way that does not damage the remaining trees, e.g. small-scale planning of felling, including planning of the felling sequence and the felling direction. Forest operations will avoid soil compaction and tree damage by means of detailed planning of the stand development, including extraction tracks for hauling and skidder trails that will be marked using GPS and be re-used for subsequent thinning operations.

Harvesting

Harvesting will take place before 2027. Harvesting operations also include thinning and harvesting of fast growing species, such as Cebo, which will be done at earlier stages, resulting in 1-2 harvesting cycles of cebo by 2027, while the other high-value trees will be harvested in a single cycle lasting until 2027. Harvesting operations will focus on minimizing environmental impact, especially on the state of the soil. Trees will be hauled to the skidder trails. From there, they will be transported to central points for further manipulation such as secondary cutting and piling. To prevent soil compaction on the skidder trails as much as possible, the skidder trails will be covered with residual wood such as crown foliage and branches to redistribute the machines' pressure footprints over a bigger area. Harvesting activities are potentially hazardous. Only skilled workers or contractors will be allowed to do any work that includes significant risks such as felling, hauling and piling. Workers will be equiped with faultless working and safety equipment, including head, eye and ear protection, safety-boots and safety overalls. Workers will receive sufficient instructions to be able to work safely. Instructions will include (but are not limited to):
- Keeping a distance of at least two tree lengths from any tree that is to be felled.
- Checking the surrounding area (area within a radius of at least two tree lengths) for hazard potential before felling a tree.
- Leaning trees will be brought to the ground using a hauling chain. No leaning trees will ever be brought to the ground by cutting the stabilizing tree.
- Nobody is allowed to move in the hazard area while hauling is conducted.
- Safety equipment is to be used for all hazardous activities.

Workers who disregard safety measures will be excluded from hazardous work. Safety standards in terms of training, equipment and protection will be the same for both directly employed workers and contractors. Contractors who disregard safety measures will be excluded from further engagement.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

BRP_Forest_Management_spacing schemes.pdf

Environmental Aspects

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Only this part of the document has to be filled out if your project is CCBS certified.

Please insert the page numbers of the PDD certified and published by the CCBA where the information about the environmental aspects can be found:
Pages: e.g. 2-12; 15; 34-37

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and A description, including pictures, of the different ecosystems* of the *project area* must be given. In case significantly different ecosystems are bordering the *project area*, these must also be described.

* This footnote is only available in the CarbonFix Standard itself.

1. Grassland: former grazing land, fallow land, edge strips/fences

Until the start of the project, around 75 percent of the *project area* was used for extensive grazing and in parts non-native grasses were introduced to improve yields. These areas have now been reforested with teak and also with a mixture of various native tree species. As the trees are still relatively young, the spaces between them are mown regularly and this will continue until the trees are better able to assert themselves against the competing grasses. For this reason the vegetation typical of the former grazing meadows has, to date, remained largely as it was. When the trees grow larger and the shadow cover increases, the grasses will gradually disappear and an undergrowth of shadow tolerant vegetation will develop. The grazing land unused since the start of the project, e.g. along fences, plot boundaries and bodies of water, has now developed a kind of

bush-dominated vegetation with a few predominant pioneer species. In Costa Rica such vegetation is referred to as *charral*. The natural regeneration of the original forest vegetation is slowed down considerably by this often very dense growth, which makes it very difficult for young trees to emerge. In the areas devoted to nature protection adequate measures will be adopted to promote the natural progression to a near-natural, secondary forest vegetation typical of the location.

An investigation of the project area's biodiversity which was carried out in March 2009 returned 37 different plant species growing on these open spaces. All of them are typical for fallow grazing land in this region. Also, a large proportion of the bird species on the Finca San Rafael is typical of this type of Costa Rican habitat.

2. Forests: secondary forest and riparian forest

Especially in the so-called *quebradas* (small valleys) and along the courses of the *Rio Plomo* and the *Rio Infiernillo*, secondary forests have survived in the *project area* in the form of riparian forests in which some large, older trees can still be found. In some areas, however, the wooded parts extend not just along the riverbanks, but form small pockets of secondary forest of varying age, with just a few dominant tree species. As well as the typical pioneer tree species such as *Cecropia spp*., there are also rarer climax species like *Lecythis ampla, Tabebuia guayacan* and *Ceiba pentandra*. A large number of saplings of a variety of tree species have been found growing in the undergrowth and at the edges of these woods, an indication of a relatively healthy potential for natural regeneration.

A total of 65 plant species could be identified in the riparian forests growing along the watercourses. In contrast, 54 species have been found so far in the remaining secondary forests. In the forested ecosystems in the *project area* several interesting animal species have also been found, including Geoffroy's Spider Monkey (*Ateles geoffroyi*) and the Mantled Howler Monkey (*Alouatta palliata*) as well as the Great Curassow (*Crax rubra*) and the Grey-headed Chachalaca (*Ortalis cinereiceps)* of the family of the Cracidae (*fowl-like birds*). Most of the amphibian and reptilian species found so far in the *project area* also use this habitat.

3. Water bodies and wetlands with riverine vegetation

The project area contains various types of water body and wetlands which have permanent status as nature reserves:

3.1. Rivers and creeks

The only river or rather creek which flows directly through the Finca San Rafael is the *Rio Plomo*, which enters the *Rio Pocosol* a few kilometres further to the north-west. The smaller *Rio Infiernillo* forms the eastern border of the Finca San Rafael and enters the *Rio Plomo* immediately to the north of the *project area*. Both creeks have a relatively small flow gradient, so that in the rainy season and after heavy showers there is often flooding. However, the floods generally disperse after a few days. The banks are mainly lined with riparian forests which serve feral animal and plant species as biological corridors. However, there are stretches where the banks are free of trees and covered only with grassy vegetation. These stretches of riverbank constitute part of the nature reserves and are being reforested with autochthonous species of site-adapted trees. So far, seven different fish species have been identified.

3.2. Stationary bodies of water

There are four larger ponds in the project area. They have been formed artificially by damming and they remain permanently stocked with water throughout the year. Each of them has an area of several hundred square metres, with depths ranging from 3 to 5 metres. The volumes of water contained in them are subject to variation according to the amount of precipitation which falls. As the ponds were used for watering cattle over a long period, the banks are only sparsely vegetated. Nevertheless, some typical plant communities have developed, providing important habitats for aquatic insects, fish, waterfowl, amphibians and reptiles. As part of the BaumInvest Reforestation Projects the banks of the ponds are to be permanently reforested as well. As in the *Rio Plomo*, seven different fish species have been found in the lakes so far, of which three also occur in the river.

3.3. Temporary bodies of water and wetlands

In addition to the two creeks *Rio Plomo* and *Rio Infiernillo* and the larger ponds, there are also smaller ponds, wetlands and other areas which regularly get flooded in the lowlands near the rivers. They fill up with water after heavy rains and in the rainy season, whilst in the dry season they sometimes dry up completely. These habitats support species communities which are specially adapted to coping with such conditions. However, they have not yet been subjected to specific investigation. These areas are also included in the nature reserves.

If the information above has any references, please state their title(s)

- BRP_Informe de Evaluación Ecológica Rápida_2009.pdf
- BRP_Monitoring of Amphibians and Reptiles_interim report_2009.pdf
- BRP_Herpetofauna Species Inventory_2009.pdf

The *project owner* must describe the following parameters of the *project*:

a. **Soil**
- Nutrients
- Erosion

b. **Water**
- Quality
- Quantity

c. **Biodiversity**
- Flora
- Fauna

d. **Climate**
- Temperatures
- Rain

a. Soil

Nutrients

BaumInvest is working soils that have been used as pastureland for the last 30 years. As a consequence of this land use, the concentrations of the relevant nutrients are low. The upper soil layers contain only a small humus fraction. A soil assessment conducted in 2007 indicates pH values in the range of 4.7-5.2 and a high concentration of Ca. N, P and K concentrations are relatively low. The soil type is oxic Dystropept of the Inceptisoles order.

Erosion

The physical properties of the soil are affected by the former use as pastureland. This usage has caused the upper soil layers to become significantly compressed, presumably resulting in above average surface run-off. Deforestation caused the the upper soil layer to become exposed, which made the soil significantly more vulnerable to erosion. Slopes are at most moderately steep; the landscape can be described as gently rolling hill country. Overall, no severe erosion problems exist in the project area exept in respect of road and track maintenance, where the lack of stabilizing plant cover and root networks results in the detrimental transport of bare soil. A medium erosion risk is evident on moderately steep slopes and river banks.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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b. Water
Quality

Negative environmental impacts on water quality are not great in the surrounding area as well as in the upstream areas. Generally, an almost neglible reduction in water quality may have occurred due to livestock farming and direct human influences in the catchment areas. When heavy rains occur an increase in the volume of sediment transported can be observed in both rivers on account of erosive action in the higher parts of the catchment area. Within the scope of the project area, the surface water does not show any major abiotic or biotic contamination, resulting in good levels of water quality. Groundwater of finest drinking water quality can be found at a depth of 50 - 70 m.

Quantity

The best available estimate for the annual precipitation is 3393 mm recorded for Ciudad Quesada de San Carlos, which is situated approximately 45 km to the south of the project area. Since no data from locations closer to the project area is available, the long-term climatic data recorded for Ciudad Quesada de San Carlos has to be used as a first approximation. BaumInvest plans to install a meteorological station in the project area. The amount of water available is sufficient to ensure rapid plant growth without the need for irrigation measures. Plentiful precipitation gives rise to temporary as well as permanent wetland conditions in some depressions on the project area. These areas are strictly protected due to their major ecological relevance. The project area lies in the catchment area of the Rio Plomo, which drains into the Rio Pocosol and further into the Rio San Juan.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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c. Biodiversity
Plants

According to the Life Zone System developed by Holdridge (1967) - one of the most widely implemented systems in Costa Rica for the classification of vegetation - the project area belongs to the premontane wet forest – rain forest transition (P-wf). From a geophysical point of view the region is assigned to the Atlantic/Caribbean rainforests in northern Costa Rica. The region marks the northern dividing line between the regions of Neotropical and Nearctic flora. With up to 140 different tree species per hectare the autochthonous forests are amongst the most diversified in the whole of Central America. However, these forests have been largely cleared for agricultural use and only a few fragmented pockets of secondary forest remain. These remnants are generally dominated by pioneer tree species. The situation is similar on the Finca San Rafael, although here the proportion of secondary forest and wetland is comparitively large, namely around 30%. Adapting to the various ecosystems present in the project area, a number of plant communities have survived or reemerged. The plant diversity is lowest on the former grazing land, especially where the invasive grass species Panicum maximum (guinea grass) and Brachiara brizantha

(palisade grass) were introduced for the cattle to graze on. The grasses, which originally come from Africa, are extremely robust and they suppress and displace the natural vegetation.

An initial assessment of the project area revealed a total of 145 plant species belonging to 71 families and 127 genera. As well as typical pioneer plants such as Byrsonima crassifolia und Cecropia spp., this includes several rare and endangered tree species, e.g. Lecythis ampla, Tabebuia guayacan and Ceiba pentandra. Further details, including the complete list of species, can be found in the report 'Evaluación Ecológica Rápida' which was compiled by scientists from the Tropical Science Center in San José.

In total, 11,451 plant species have been located in Costa Rica (Obando, INBio-SINAC/MINAE 2007), of which at least 1000 are to be found in the Area de Conservación Arenal Huetar Norte (AC-AHN) which contains the project area (Ulate, 2009).

Animals

Costa Ricas' fauna also reflects its situation in the transition zone between North and South America. However, apart from the reptiles, most of the vertebrate species originated from the southern continent. As several important bird migration routes run through the Central American land bridge, the proportion of seasonally migrating bird species is very high and includes many species of waterfowl which come to Costa Rica to spend the winter or to breed. Whereas the species diversity in the untouched rainforests in northern Costa Rica is very great, the isolated remnants of secondary forests in the agriculturally used areas are generally only able to support a few adaptable species in the long term. An initial species count was carried out which concentrated on mammals, birds, fish and aquatic insects. A total of 83 avian species, 11 fish species and 39 aquatic insect species was found. The species count for mammals so far amounted to 8, a comparitively low figure. However, the particularly species-rich bat and rodent populations have not yet been investigated in detail. It is at least worthy of note that the 8 mammal species include two kinds of monkey. The most detailed investigation to date was focused on the amphibian and reptile populations. This was carried out as part of a research programme in cooperation with the Senckenberg Research Institute and Natural History Museum in Frankfurt am Main. Two periods of research yielded a total of 17 amphibian and 22 reptilian species.

Almost all the species found are typical of the region and, not surprisingly, they count amongst the adaptable generalists which are able to cope with seriously fragmented habitats. Nevertheless, some rare and endangered species such as several parrot species amongst the birds as well as the two monkey species amongst the mammals have survived in the relatively small project area. These species will certainly profit from these habitats being placed under protection. The structural diversity of the project area is characterized particularly by the large number - 83 - of bird species, which represent around 10% of all the avian species native to Costa Rica. But this proportion of 10% of the national totals is also achieved by the fish, amphibian and reptile species. Further details, together with the complete list of species, can be found in the paper 'Evaluación Ecológica Rápida' and the Senckenberg Research Institute and Natural History Museum's research findings.

The species totals so far determined for Costa Rica are as follows: 239 mammalian, 862 avian, 226 reptilian, 183 amphibian and 135 piscine (freshwater) (Obando, INBio-SINAC/MINAE 2007).

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- BRP_Informe de Evaluación Ecológica Rápida_2009.pdf
- BRP_Monitoring of Amphibians and Reptiles_interim report_2009.pdf
- BRP_Herpetofauna Species Inventory_2009.pdf

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d. Climate
Temperature

Costa Rica is a tropical country, situated between the 8° and 11° north latitudes, fairly close to the equator. Although temperatures in the mountains above 2000 metres get much cooler, the average

annual temperature for most of the country lies between 21.7°C and 27°C. The coolest months are from November to January, and the warmest from March to May. Since no climatic data originating directly from the project area itself is available yet, data from the nearby Ciudad Quesada de San Carlos, which is situated approximately 45 km south of the project area, has to be taken as a first approximation of the climatic conditions in the project area. However, it should be borne in mind that Ciudad Quesada de San Carlos lies approx. 650 m above sea level, whereas the project area is in the lowlands at approx. 100 m above sea level. The mean annual temperature in Ciudad Quesada de San Carlos (Alajuela) is 26.1°C as reported by Perez (2005). This value can be used to estimate conditions in the project area. Bauminvest is planning to install a meteorological station on the project site.

Rain

The climate of Costa Rica is divided into two major basic seasons: rainy and dry. The dry season lasts from January to May and the rainy season from May to November and December. Rainfall patterns, although seasonal, vary greatly in intensity from one geographical area to another. Some locations receive over 6000 mm of precipitation per year, while others receive fewer than 1500 mm. Since no climatic data originating directly from the project area itself is available yet, data from the nearby Ciudad Quesada de San Carlos, which is situated approximately 45km south of the project area, has to be taken as a first approximation of the climatic conditions at the project area. The mean annual precipitation for Ciudad Quesade de San Carlos (Alajuela) is 3393 mm as reported by Perez (2005). This value can be regarded as a rough estimate of the precipitation in the project area.

The topography of the country has a great influence on the weather patterns of a given locality. As a result, the timing of the dry and rainy seasons varies somewhat on each slope of the mountain ranges that run from the north-west to the south-east and divide the nation into a Caribbean slope and a Pacific slope. The project area belongs to the Caribbean slope, where the rainy season begins from mid to late April and continues through December and sometimes until January. The wettest months are July and November, and there is a dry spell that occurs around August or September. Major storms, called 'temporales del Atlantico' occasionally buffet this slope between September and February, when it will rain continuously for several days; but an average rainy season day will begin clear with a few hours of sunshine that then give way to clouds and rain by the afternoon. The driest months are February and March with only a few days of rainfall.The north-easterly trade winds, known locally in Costa Rica as 'alisios', blow with considerable strength from December to March and April.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- Perez_2005_Stand growth scenarios for Tectona grandis plantations in Costa Rica.pdf

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The *project* must ensure that positive impacts are enhanced and negative impacts are mitigated - respectively avoided, if they are not essential for the *project* activities.

For point ‘d. Climate’ no description of impacts must be given.

a. Soil
Impacts on soil (Nutrients)

Afforestation of the the planting area has positive impacts on the soil in terms of both quality and structure. Soil melioration measures include the application of lombricultura compost to reduce soil acidity and organic bokashi (a specific compost) fertilization to increase nutrient availability. When the trees have established themselves, litter production and decomposition will increase nutrient turnover. Biological activity in the soil will increase. Afforestation, in combination with organic fertilization measures, will avoid negative impacts such as potential nutrient depletion or nutrient leaching. A further decline in pH values such as has been observed on sites that were afforested with conifers, is not to be expected on the area designated for planting, since it will be afforested

with mixed broadleaved species whose litter decomposition rates are generally higher. Additionally, high temperatures and plentiful precipitation provide favourable conditions for decomposing microorganisms.

Impacts on soil (Erosion)

Afforestation will have positive impacts on physical soil conditions. The unavoidable mechanical soil cultivation will penetrate compressed soil layers and reduce physical soil compression. This measure might be expected to have a negative impact on wind erosion susceptibility in the short term, since the upper, lighter soil layers' susceptibility in respect of aolian transport will increase. However, the general degree of susceptibility to erosion will decrease, because the reduction in soil compression on account of the cultivation will facilitate the steady and uniform absorption of water, resulting in less surface run-off. In view of this, ploughing has been carried out parallel to the contour lines to reduce the risk of erosion through surface run-off. In the short to medium term, tree and understorey roots will stabilize the soil. Furthermore, understorey vegetation will protect the soil surface. Interception by trees will decrease water run-off on the ground, preventing water erosion. A closed forest stand will reduce wind speeds within the stands, reducing the risk of wind erosion. Minor excavations required for the redevelopment of maintenance tracks will be accompanied by adequate stabilization measures, both mechanical as well as by means of root stabilization. Where necessary, additional trees are to be planted systematically (preferably Pithecelobium longifolium and Acacia mangium) to stabilize the soil on slopes and in the vicinity of maintenance tracks to decrease soils' susceptibility to relocation.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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b. Water

Impact on water (Quality)

Afforestation will have net positive impacts on water quality. Trees will absorb water through interception and the root system, preventing nutrient leaching. Forests will filter water and thus improve its quality. Negative impacts of afforestation are considered to be neglible, since environmentally harmful pesticides or fertilizers will be used as little as possible in the project, if possible not at all.

Impact on water (Quantity)

Afforestation will reduce water surface-runoff through increased water infiltration and interception. Soil water losses caused by water being taken up through the trees' root systems and by interception will be compensated by improved water infiltration. For this reason the groundwater regime is not expected to be negatively affected.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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c. Biodiversity

Impact on biodiversity (Plants)

There is no doubt that the project will have positive effects on the diversity of the plant species and reduce negative influences. The expansion of the nature reserves with secondary forests and wetlands provides protection which will allow the vegetation to regenerate undisturbed. A large number of seedlings of various tree species are an indication of a healthy natural regeneration potential. Important seed disseminators such as monkeys, birds and bats are present in the project area and provide a natural means of increasing the plant diversity by spreading seeds which have originated both within and outside the project boundaries. As part of the project's nature protection plan, additional measures are being implemented, for instance to curb the spread of particularly aggresive, invasive species like Heteranthera reniformis und Pteridium aracnoideum. Where it is

possible and reasonable, thickly growing brushwood (Charral) which prevents natural succession is being thinned out and enriched by planting typical indigenous tree species so as to accelerate the regrowth of near-natural secondary forest. This also provides a way of re-establishing species typical of the region which were present previously, but have now nearly or completely died out. The various, in many cases isolated nature reserves will be progressively reconnected with each other in order to provide biological corridors for wild animal and plant species. In addition, BaumInvest has reforested at least 50% of the area with native species such as Cebo (Vochysia guatemalensis), Roble Coral (Terminalia amazonia), almond (Dipteryx panamensis) and caoba (mahagony, Swietenia macrophylla) in mixed stands. The provision of a supply of these wood types from plantations eases the pressure on natural sources. This is particularly important in the case of almond and caoba (mahagony), as the naturally occurring populations have been exploited practically to extinction. These tree species have been placed under special protection in Costa Rica and are listed in Annex 3 of the Convention on International Trade in Endangered Species (CITES).

Impact on biodiversity (Animals)

Just as is the case with the plant species, we anticipate that the project will have significantly beneficial effects on the species diversity amongst the animals and at the same time reduce negative influences. The nature reserves already provide a habitat and sustenance for many different species of animal. With improved protection measures, e.g. against poaching, and by extending the boundaries the situation will improve continuously. The reconnection of previously isolated habitats by means of biological corridors improves the transfer of genetic information between the populations. Larger, more stable populations will develop in numbers which will ensure their long-term survival. Where former grazing areas are reforested for the purposes of nature protection, e.g. along the banks of rivers and lakes or to provide biological corridors, it is our intention that trees are planted which produce fruit suitable as food for a large number of animal species. This includes the Central American forest almond or 'almendro' (Dipteryx panamensis), the almond-like fruits of which are essential for the survival of the Great Green Macaw (Ara ambiguus). Especially in the planting areas being reforested with indigenous trees the conditions for many wild animals are improving in terms of habitat and food supply. Another aspect of the nature protection plan involves leaving undergrowth and dead wood undisturbed in the reforestation areas in order to provide further ecological niches. This will benefit the amphibians and reptiles in particular; these animals have disappeared almost completely from the open grazing land.

As the amphibian and reptile populations react more sensitively to changes in environmental conditions and to environmental influences, they make very good indicators for assessing habitats from an ecological point of view. For this reason, a monitoring programme was inaugurated in March 2009 with the aim of observing the development and constitution the amphibian and reptilian species within the project area over a long period of time. The findings will provide a measure of the extent of the environmental changes and the effectiveness of the nature protection measures.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- BRP_Informe de Evaluación Ecológica Rápida_2009.pdf
- BRP_Monitoring of Amphibians and Reptiles_interim report_2009.pdf
- BRP_Herpetofauna Species Inventory_2009.pdf

The use of herbicides and insecticides must be documented. A list of applied products must be given.

The use of chemicals will only be considered if the project objectives will otherwise be severely endangered and no suitable alternative options are available. If such a situation arises, an appropriate product will be deployed after careful evaluation of its environmental impact. The use of chemicals will always be specific, targeted and of limited duration. The use of any chemical will be documented in the project database.

Name of product	Main ingredient	Purpose
Cupravit	copper hydroxide	fungicide used in the nursery

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

When chemicals are used there must be sufficient training and proper equipment to minimize environmental impacts.

If chemicals are used in the project, our contractors are responsible for safety requirements, the necessary training for operation and the provision of proper equipment to minimize negative impacts on the environment, especially on aquatic ecosystems.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Waste must be disposed of in an environmentally appropriate way.

As a basic principle, waste is separated into biodegradable and non-biodegradable waste. Biodegradable waste is chaffed, composted and reused as organic fertilizer (e.g. Bokashi). As there is no waste management system in the rural areas of Costa Rica, non-biodegradable waste is collected in waste containers to prevent soil and ground water contamination. It was our intention to carry non-biodegradable waste for final disposal to the next sanitary landfill in Los Chiles. But we discovered that that waste disposal site was in such poor condition that we anticipate that carefully burning the non-biodegradalbe waste according to local usage will have less impact on the environment.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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15 meter wide buffer strips along permanent or temporary watercourses (streams, rivers, wetlands, etc.) shall be implemented. These buffer strips become

- part of the *nature conservation area*, or
- must be managed according to 'Future CO_2-fixation - Option 1b (Conservation Forest)'.

If they are managed by 'Option 1b' only native trees species are allowed to be planted.

Are 15 m wide buffer strips along the watercourses respected? Yes

Additional comment:

Along the course of the Rio Plomo and Rio Infiernillo, as well as in small side valleys (quebradas), riparian forests line the banks. These forests also constitute part of the nature conservation areas. However, the banks of some river stretches, and especially the edges of the lakes and wetlands, have been almost completely cleared of trees. These areas will be reforested as conservation forests (Option 1 b) using indigenous tree species typical of the region. This will stabilize the banks and protect them from erosion. In addition, they will form important biological corridors for wild animals and plants.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

No flooding irrigation, regular irrigation or drainage shall be executed.

Is flooding irrigation, regular irrigation or drainage part of the *project* activity? No

Additional comment:

Irrigation will be carried out only in the tree nursery and as required when the seedlings are planted out. The water to be used is obtained from the Rio Plomo and it will be pumped to the tree nursery using an electric pump.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

No area-wide ploughing is allowed. Mechanized ploughing must be limited to the purpose of planting.

Is ploughing part of the *project* activity? Yes

Description:

Mechanized ploughing has been carried out using a tractor, plough and harrow on open areas only and limited to the purpose of planting. The ploughing was deliberately carried out so that the furrows ran parallel to the contour lines so as to mimimize the risk of erosion through surface run-off.

1. for what purpose: Ploughing is necessary to alleviate soil compaction and to create soil conditions that promote the establishment of trees.

2. how deep: Approximately 30 cm deep.

3. to what extent: As a principle, ploughing is employed to the smallest possible extent. Mechanized ploughing is limited to the purpose of planting. Ploughing of large areas is avoided so as to reduce erosion and for carbon emission related reasons. Ploughing is limited to flattish areas, mainly flat humped tops without significant erosion risks. No ploughing is ever carried out on or close to major slopes.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

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and Genetically modified* tree species are not allowed to be used.
* This footnote is only available in the CarbonFix Standard itself.

Are any genetically modified trees planted in the *project area*? No

Additional comment:

The seed for planting is selected with great care. Genetically modified seed is not used as a matter of principle. Especially in the case of the indigenous trees, preference is given to seed obtained regionally.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

 Native species in mixed stands managed with a selective harvesting method are preferable.

Otherwise, the *project* must justify its
- choice of tree species, and/or
- silvicultural system, and/or
- harvesting method.

Are native species being used only? Partly

Justification for not using native tree species only:

Experience with the commercial cultivation of native tree species, such as Dipteryx panamensis, Swietenia macrophylla and Terminalia amazonia is limited. Peer reviewed scientific literature on growth rates, stability and economic returns is scarce. Literature on growth rates does not cover more than approximately 12 years of research, counting from the initial planting. Information about possible risks concerning the stability of nativos in plantations is accordingly limited to this 12 year period. Markets for native wood exist, but in view of the small quantities of native wood on the market coming from a limited number of suppliers, it is hard to estimate future market prices. Having reviewed all the existing sources of uncertainity about the risks of planting nativos, BaumInvest concluded that planting exclusively native trees on the planting area would significantly increase the project's risk profile, thus negatively affecting the sustainability of the project and discouraging potential investors.

Teak (tectona grandis) is one of the non-native species being planted in the project area. Long term experience in plantations in Costa Rica shows that it easily adapts to the climatic and physical conditions of the project area and is resilient to pests and diseases. It is used mainly to increase the degree of financial stability of the project as a whole, as teak commands a reliably high price on the international timber market. Teak has therefore been planted on approximately 50% of the planting area to compensate for the risks inherent in the planting of native species.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Is all forest managed in mixed stands? Partly

Justification for not using mixed stands only:

Although BaumInvest aims at producing trees in mixed stands, it does not manage the plantation completely in mixed stands. Teak is produced in mixed stands with eco-groups of T. amazonia and D. panamensis, respectively. However, teak is also planted in pure stands. The reason for managing a part of the planted area as pure teak stands is that experience for mixed teak stands in combination with native species such as D. panamensis, S. macrophylla and T. amazonia is scarce. Since the production of teak is an important factor for the sustainability of the whole project (which depends, among other things, on an appropriate economic return), BaumInvest manages a proportion of teak stands in a conservative, low-risk manner. However, teak is also planted in mixed stands with native species to advance the body of silvicultural knowledge concerning the viability of mixed teak stands in Costa Rica.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Will all forest be harvested with a selective harvested method? No

Justification for not using a selective harvested method only:

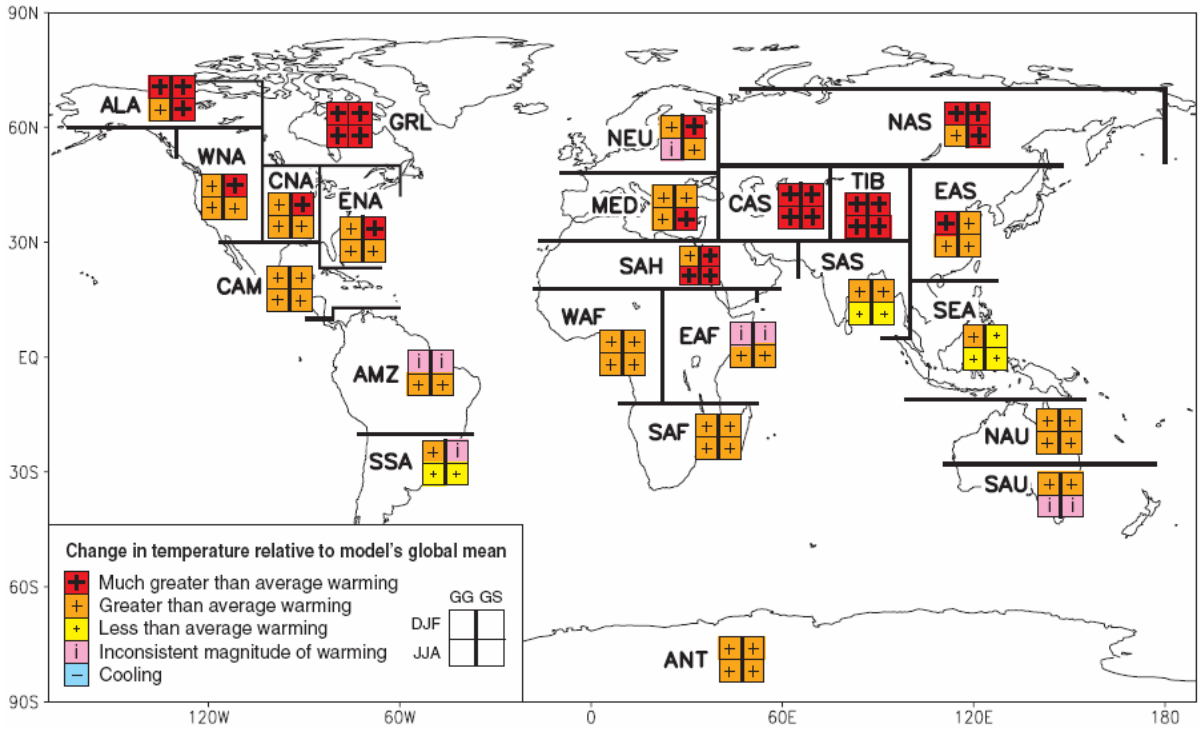
Selective harvesting methods combine various ecological advantages compared with rotation systems; however, rotation management is considered to be suitable for a project such as the

BaumInvest project. This can be justified since BaumInvest will be obliged to harvest an even-aged stand within a limited time interval until the term of the closed-end fund is reached. However, thinnings will be conducted for preference in a selective rather than in a schematic way.

According to the way in which the various indigenous tree species develop in the mixed stands, it is quite likely that they will be harvested selectively. Investigations are being carried out to establish whether it is possible to plant the next generation of (indigenous) trees in the spaces created by thinning operations. In this way, the plantation could be transformed in the long term into a sustainable forestry operation with selective harvesting. This model would correspond better with our own ecological forestry standards and the principle of sustainability, as does rotation forestry.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

All species must be site-adapted, also under changing climate conditions – considering the latest IPCC report*.
* This footnote is only available in the CarbonFix Standard itself.



Source: www.grida.no/climate/ipcc%5Ftar – Report 'The Scientific Basis' – Chapter 10 – Page 596

Costa Rica is located in the CAM zone (Central America zone). Climate projections according to the IPCC scenarios indicate greater than average warming and an overall decrease in precipitation for the future. There is a high degree of uncertainty as to the most appropriate way to react to climate change from the silvicultural point of view. Overall, it is not only shifting average temperatures and precipitation that are expected to have the highest impact on forests, but also changes in the occurrence and intensity of extreme events. Recommendations on how to deal with climate change include the selection of native species or non-native species that are likely to be able to deal with current and projected future conditions. If a species is currently at the dry end of its suitable range, it should not be planted. Furthermore, mixed stands are considered to be better adapted to climate change, since a forest's overall susceptibility to climate change will be diminished by risk diversification over a range of species. From a silvicultural management point of view, methods exist to increase single-tree and stand stability in respect of climate change. Of major concern are the modifications which may take place in pathogen-forest interactions under climatic change. Higher temperatures might foster pathogen populations and thus have negative impacts on otherwise well adapted tree species.

BaumInvest manages the planting area as mixed stands, of which 50% of the trees are of native origin. BaumInvest's focus is on increasing stability both on single tree and stand level. To increase single tree stability, only 625 seedlings per hectare are planted. This will maximise the diameter increment. To maximise stability on a stand level, it is crucial to prevent growth stagnation caused by over-stocking. The planting area will receive timely thinnings of appropriate intensity.

The average rotation length for the planting area is less than 25 years. The short production period reduces production risk and susceptibility to damage caused by climate change. It leaves room for flexibility in tree species selection. Trees that are adapted to site conditions now are likely to be able to show good growth rates for the next 25 years. For the next rotation, species selection can adapt according to the lessons learned and be modified on the basis of experience, current conditions and more detailed forecasts.

Teak grows under a variety of ecological conditions. In its native range in south-east asia, conditions as variable as mean annual temperatures from 21°C-26°C and precipitation from 780 mm in India to 2500 mm in Myanmar occur. In Costa Rica, teak is planted in areas with a mean annual temperature from 26°C-27°C and precipitation from 1659 mm - 4107 mm. Climate data for the project area yields a mean annual temperature of 26.1°C and 3393 mm precipitation. An increase in temperature and a decrease in precipitation might bring teak to its upper ecological temperature limit. However, the fact that teak has not been planted in hotter environments does not neccesarily indicate that it cannot adapt to higher temperatures; it might simply be outcompeted by other species or suffering from a water deficit in these conditions. Since water will not be the limiting factor in Costa Rica, growth rates of teak might even increase in warmer conditions. Until now, teak has proven to be relatively resistant to pests. For the native species, average temperatures range from 24°C - 30°C for V. guatemalensis, 22°C -35°C for T. amazonia, 24°C-30°C for D. panamensis, and approximately 25-28°C for S. macrophylla.

The average precipitation for the project area is 3393 mm. Even a moderate decrease in precipitation will not lead to drought stress; at most it might insignificantly decelerate growth rates. From the present day perspective, BaumInvest considers the current selection of tree species, combined with proactive management, to provide a sufficiently flexible response to climate change in the project area for the next 25 years.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

- Perez D (2005) Stand growth scenarios for Tectona grandis plantations in Costa Rica. Reference document: Perez_2005_Stand growth scenarios for Tectona grandis plantations in Costa Rica.pdf

- Tropical Tree Seed Manual_D. panamensis.pdf
- Tropical Tree Seed Manual_S. macrophylla.pdf
- Tropical Tree Seed Manual_T. amazonia.pdf
- Tropical Tree Seed Manual_T. grandis.pdf
- Tropical Tree Seed Manual_V. guatemalensis.pdf

Two signed statements from

a. a responsible forestry, wildlife or environmental authority, and
b. a registered NGO in the environmental sector, which is acting independently from the *project*, must confirm:
    - that the *project* operates according to national environmental laws,
    - that the existence of a native endangered* species is not threatened due to the *project* activities, and
    - that the *project* has a net positive impact on the environment.

* This footnote is only available in the CarbonFix Standard itself.

a. BRP_Statement_Environmental Authority_MINAET.pdf
b. BRP_Statement_NGO_CL-CBSS.pdf

This document will be made publicly available. CO_2-buyers will be able to use this information for marketing purposes.

Socioeconomic Aspects

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Only this part of the document has to be filled out, if your project is CCBS[*] certified.

Please insert the page numbers of the PDD certified and published by the CCBA where the information about the socioeconomic aspects is located:

Pages: e.g. 2-12; 15; 34-37

Sufficient evidence must be given to the certification body to be able to confirm

- *the long-term net positive socioeconomic impact.*

The current situation of the following aspects, together with the possible impacts caused by the *project* must be described:

a. **Creation of employment**
   - *management*
   - *employees*
   - *contractors*
   - *workers*

b. **Capacity building**
   - *management*
   - *employees*
   - *contractors*
   - *workers*

c. ***Neighbourhood***
   - displacement of people
   - welfare activities

The *project* must ensure that positive impacts are enhanced and negative impacts are mitigated - respectively avoided, if they are not essential for the *project* activities.

a. Creation of employment

	Amount of people (currently)	**Amount of people** (long-term)
Management	1	1
Employees	3	4
Contractors	2	2
Workers	16	10
SUM	**22**	**17**

Description:
Description - Creation of employment

BaumInvest's reforestation project is located in the Northern Zone of Costa Rica, a sparsely populated, underdeveloped and rural area which is characterized by extensive agriculture and forestry. Many small farmers work the land at subsistence level. Only a relatively small proportion of the population receives a regular wage in a secure job. Up to two-thirds of the employable adults depend for their income on casual employment as day or seasonal laborers in one of the few large agricultural and forestry enterprises in the region. The most important employers include pineapple plantations, which are currently subject to massive criticism on account of the often unacceptable working conditions. Lacking alternatives, the workers are obliged to accept the health risks associated with the intensive use of fertilizers and pesticides in the pineapple plantations. However, in the immediate vicinity of BaumInvest's reforestation project agricultural activities are almost entirely confined to extensive livestock farming (for fattening), which requires only a very small labor force. For this reason the BaumInvest project represents an especially important income

[*] CCBS = Climate Community Biodiversity Standard: www.climate-standards.org/projects

opportunity for the people of the nearby village of San Rafael de Pocosol. Almost all the people working for the contractors HERPA and SOLVE come from the village or nearby. Of the current total of 16 workers, 7 are women who are employed mainly in the tree nursery and for the manual mowing work. The care and management of the plantation in strict observance of ecological standards is very work intensive, so that we are working on the assumption that the Finca San Rafael will support 10 secure jobs in the long term, providing fair and appropriate wages and adequate social security arrangements. The management jobs (in Costa Rica) as well as those provided by the contractors are also long-term secured.

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b. Capacity building

The capacity building for the *management* is described in the document 'Management Capacity'.

Description of the capacity building carried out for the ***employees***:
Description - Capacity building employees

Puro Verde Paraiso Forestal, BaumInvest's subsidiary in Costa Rica responsible for the management, care and day-to-day running of the reforestation project, cooperates mainly with contracting partners and has itself only three employees. Capacity building occurs mainly in the form of on the job training during the daily working times. Where additional knowledge and skills are required, participation in appropriate vocational training and educational schemes is provided on an individual basis.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Description of the capacity building carried out for the ***contractors***:
Description - Capacity building contractors

Puro Verde Paraiso Forestal cooperates with two contracting partners. Viveros y Plantaciones Forestales HERPA S.R. (HERPA) is responsible for the tree nursery and the cultivation of the saplings, whereas Soluciones Verdes S.A. (SOLVE) takes care of the reforestation and subsequent care of the plantation. The executive directores of the two companies have up to 30 years of practical experience in their respective areas of work and they have attended a large number of national and international meetings and events devoted to their subjects. Through close cooperation, each party profits from the other's expert knowledge and experience, as well as from feedback and input from external forestry experts and ecologists from a range of disciplines who pay regular visits to the project.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Description of the capacity building carried out for the ***workers***:
Description - Capacity building workers

Capacity building for the workers devolves on the contractors.
Almost all of HERPA's and SOLVE's employees are unskilled workers from the neighbouring village and the immediate vicinity. They receive instruction and training as required from the very experienced executive directors of the two companies.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

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c. Neighbourhood

Has it been necessary to **displace people** for *project* activities? No

If so, describe this displacement activity in detail:
If the displacement is still ongoing, please also describe when the displacement will end.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Have there any **welfare activities** been undertaken for the neighbourhood? Yes, there are.

If so, please describe these activities in detail:
Description - Welfare activities

Aspects of ecological and socio-economic sustainability in the reforestation project are of very great importance to BaumInvest. Around 230,000 EUR or 2.7% of the capital investment have been included in the budget for these aims as fixed items. To date, BaumInvest has already endowed 10,000 m² of its own reforestation area to the local school, the Colegio Telesecundaria San Rafael de Pocosol. The area has been planted with teakwood which will later be available to the Colegio either for its own use or for sale. Part of the area is used by the school as a vegetable plot with the aim of improving what the school canteen can provide in terms of fresh food and also to save costs. In addition, BaumInvest sponsors the soccer team and supports a range of other events and activities initiated by the community of San Rafael de Pocosol.

However, it is not the primary aim of BaumInvest to distribute charitable handouts, but to promote the community's independent and sustainable socio-economic development. BaumInvest's employment policy gives priority to local people. Project employees and local smallholders are allocated space to practice intercropping between the trees (agroforestry) in order to improve their self-sustainability or to generate extra income from the sale of their produce. If required, BaumInvest can supply microcredits and technical support for them.

As the need arises and as much as is feasible, local services are used. BaumInvest's presence as largest local employer in the immediate neighbourhood of the community (1 km distant), together with regular visits from cooperation partners, investors and other interested parties, film teams and journalists have already had a noticeably positive effect on the local economic situation. As a direct result of these stimuli, a new "soda" (snack bar) opened in March 2009.

The project is still at relatively early stage of development. Now that the basic reforestation project has been completed, BaumInvest will be devoting more resources to the promotion of the socio-economic development of the community.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

A first aid kit must be reasonably accessible for all *workers*.
Describe here how workers have access to first aid kits

A first aid kit is always available at the administration building of the Finca San Rafael. Contractors are advised to bring first aid kits for their workers to the field. Larger vehicles used in the project are also equipped with first aid kits.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Workers must be able to organize themselves and voluntarily negotiate with their employers.
Describe here if the above mentioned criterion is fullfilled

Commensurate with the relatively small scope of BaumInvest's reforestation project at the present stage of development, the number of workers employed is still very low. Concerns can be addressed directly to the respective supervisor at any time, as there is always a close personal contact and the atmosphere is quite informal.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

All equipment (tools, machines, etc.), including those of the *contractors*, shall be in safe working mode.
Describe here how it is assured that tools are in a safe mode

All our tools and machines are checked regularly and maintained according to instructions. Workers are not allowed to use equipment which is not in good working order. The contractors are responsible for the safety of their own equipment.

When new machines are acquired, the staff is given instruction in the proper use, maintenance and care of the new equipment by the suppliers.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Proper protective equipment and training of the *workers* must be enforced - especially when chemicals are used.
Describe here how it is assured that protective equipment is provided

For safety reasons, all field workers are advised to wear safety shoes, e.g. rubber boots, to avoid injuries and to protect themselves against snake bites. Workers are thoroughly instructed by our contractors to handle their respective tools and machines in a proper and safe manner. Where they have to deal with chemicals they receive prior special instruction and training and adequate protective clothing and equipment is provided. The foreman in charge ensures that the instructions are adhered to.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Children under the age of 16 are not allowed to work for the *project*.

Do children under the age of 16 work within the *project*? No

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Contracts must clearly define the following aspects:

For *employees*

a. working hours and leave of absence (holiday, sickness and pregnancy)
b. duties
c. salary
d. modalities on health insurance
e. modalities on the termination of the contract

For *contractors*

a. tasks (quantity, quality, time)
b. payment
c. modalities on the termination of the contract

Are all points stated above clearly defined in contracts and is a copy of a contract attached?
For employees: Yes For contractors: Yes

Additional comment: Comment (optional)

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Workers shall preferably be from the area around the *project*.

Does the majority of the workers come from neighbouring villages? Yes

If not, please describe the reasons for it and state where the workers come from.
Description - Local workers

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Spiritual, religious, or other socially important places within the *project area* must be treated in consensus with the concerned people.

Are there such places within the *project area*? No

If so, please name the places, describe these and state how conflicts are avoided:
Description - Socially important places

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Neighbours must be able to address their concerns to the *management* of the *project*.

To meet the above criterion the *project* is making use of:

- ☐ So-called 'liaison workers' that are assigned to forward concerns and suggestions.
- ☐ A publicly accessible suggestion box.
- ☒ Regular meetings with neighbours, respectively its representatives.

If none of the above was selected, please describe how *neighbours* can address their concerns:
Description - Address concerns

Because of the relatively small size of BaumInvest's reforestation project to date and the sparsely populated rural environment, there are only four neighbours whose properties border directly on the project area. The tiny village of San Rafael de Pocosol is about 1 km distant. The community consists of approximately 65 households, most of them widely scattered in the surrounding area.

Most of the employees working for the project live here with their families. Whenever representatives of BaumInvest's management board visit the project, they spend some time in the village. Everybody knows us, and if a problem should have arisen, people usually communicate their worries directly to us. If required, meetings with representatives of the community can be arranged to discuss emerging problems. Regular meetings with the local village spokesman take place once a month.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

 The decision-making process for concerns of *neighbours* must be described. Results must be implemented in a cooperative way.

Description on how the decision-making process is conducted:
Description - Decision-making process

BaumInvest takes the concerns and suggestions expressed by the people living in the neighbourhood of the project very seriously. As these matters are generally addressed directly to the managing director of Puro Verde as responsible member of staff when he is on one of his regular routine visits to the project, it has proved possible in most cases to find quick and unbureaucratic solutions to problems as they emerge. In addition, the responsible managing director of Puro Verde can be reached by telephone at most times, either through the office in Los Chiles or directly.

Description on how decisions are implemented:
Description - Decision implementation

Decisions to solve emerging difficulties are taken in mutual agreement involving all the people concerned and without delay.

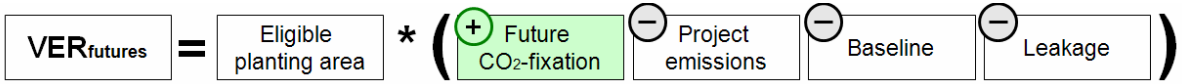
If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.
Name of reference document(s) or picture(s)

Future CO_2-fixation

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that the variables used for the calculation follow a conservative approach and*
- *that the amount of $VER_{futures}$ has been accurately calculated according to the CFS formulas.*



For the calculation of the Future CO_2-fixation the following carbon pool must be determined:

Carbon Pool		*Examples*
Woody	Aboveground	*Stem, branches and bark*
	Belowground	*Tree roots*

and To determine the Future CO_2-fixation, a *management unit* specific and scientifically based growth-model must be used. A description of this growth-model must be given.

Option 1 – a) <u>Selective harvesting</u>* or b) Conservation forest

* This footnote is only available in the CarbonFix Standard itself.

By applying this option, the *project* must give evidence with all of its characteristics (tree species, CV of the *project developer*, etc.) that the silvicultural aim of the *project* is to use the forest with a selective harvesting regime or to conserve it.

* **Selective harvesting** is done by the continuous harvest of single trees or groups of trees without lowering the forest stock significantly.

In both cases, Selective harvesting and Conservation forest, the Future CO_2-fixation of the *management unit* is determined by the Equilibrium stand volume of the *management unit*. If the Equilibrium stand volume of the forest is not reached by year 50, the Future CO_2-fixation is determined by the maximum stand volume at year 50.

Option 2 - Rotation Forestry

In case of Rotation forestry, the Future CO_2-fixation is determined by the Mean stand volume during the first rotation period. If the first rotation period takes longer than 50 years, the Future CO_2-fixation is determined by the Mean stand volume within this first 50 years.

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and As soon as the trees are tall enough, forest inventories must be conducted to adapt the growth-models. These inventories must be executed before every regular *certification* process and shall follow the 'Inventory' guideline. GUIDELINE: Inventory

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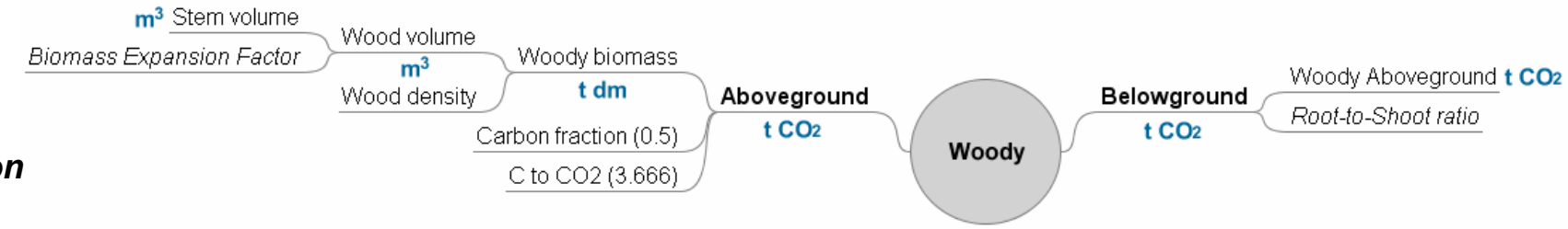


Future CO_2-fixation

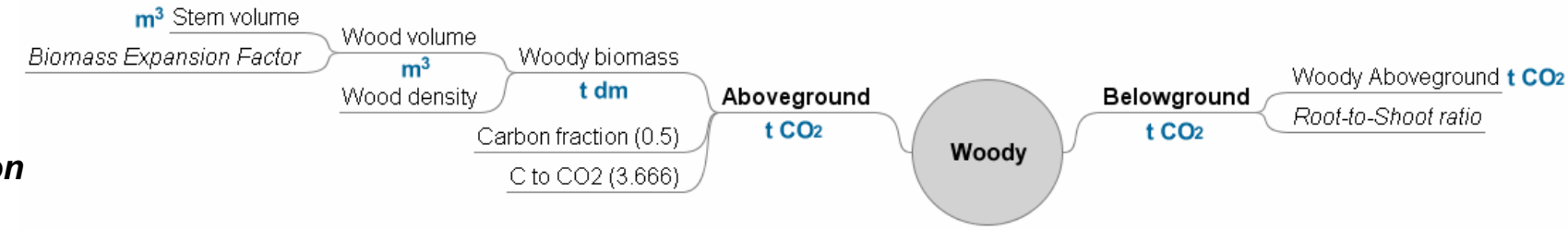
Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor
- Woody Belowground = Woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Future CO_2-fixation	= Woody Aboveground + Woody Belowground

Growth-model ID **T1 & T2**		**Adaptive inventories**	**Factors**
Key-figures	Category of calculation: 2) Rotation forestry Time period covered by the growth-model: 20 years Type of calculation used: Mean Stand volume Stand volume: 104,40 m^3 of Stem volume ha	Amount of adaptive inventories: 0	Biomass Expansion Factor: 1,53 Wood density: 0,68 Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 0,42
References	Description of the growth-model: Growth projection based on conservative assumptions. CO2 sequestration calculates according to CFS requirements. Reference of the growth-model: 06-100_summary_CO2_Fix.xls 06-101_Growth model description	Inventories used to adapt the growth-model: -	**Biomass Expansion Factor:** **International default value** Reference: 06-02, page 3178 06-03, page 218, Table 3 (see comment Ref. 06-100, cel F8) **Wood density: International default value** Reference: 06-04, page 1 (see comment Ref. 06-100, cell H8) **Root-to-Shoot ratio: International default value** Reference: 06-01, page 3168
Comment			Comment
Future CO_2-fixation	**283 tCO_2/ha**		

This document will be made publicly available. CO_2-buyers will be able to use this information for marketing purposes.



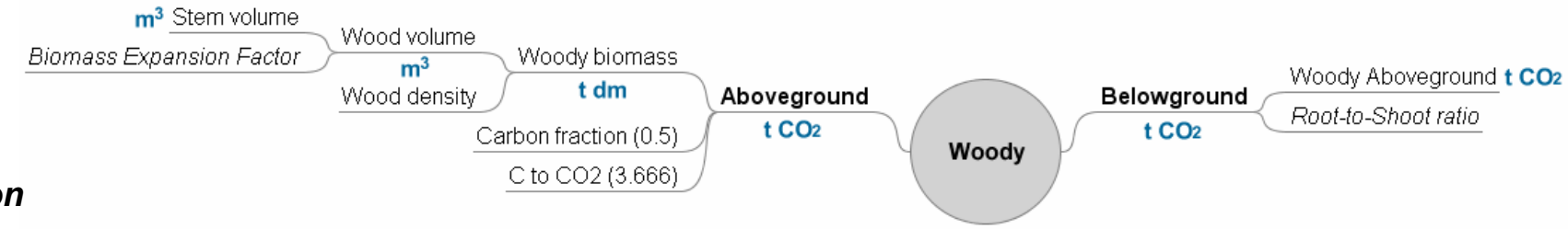
Future CO_2-fixation

Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor
- Woody Belowground = Woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Future CO_2-fixation	= Woody Aboveground + Woody Belowground

Growth-model ID **A1 & A2**		**Adaptive inventories**	**Factors**
Key-figures	Category of calculation: 2) Rotation forestry Time period covered by the growth-model: 20 years Type of calculation used: Mean Stand volume Stand volume: 98,85 m^3 of Stem volume ha	Amount of adaptive inventories: 0	Biomass Expansion Factor: 1,50 Wood density: 0,96 Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 0,42
References	Description of the growth-model: Growth projection based on conservative assumptions. CO2 sequestration calculates according to CFS requirements. Reference of the growth-model: 06-100_summary_CO2_Fix.xls 06-101_Growth model description	Inventories used to adapt the growth-model: -	**Biomass Expansion Factor:** **International default value** Reference: 06-07, page 12 **Wood density: International default value** Reference: 06-08, page 446 **Root-to-Shoot ratio: International default value** Reference: 06-01, page 3168
Comment			Comment
Future CO_2-fixation	**370 tCO_2/ha**		



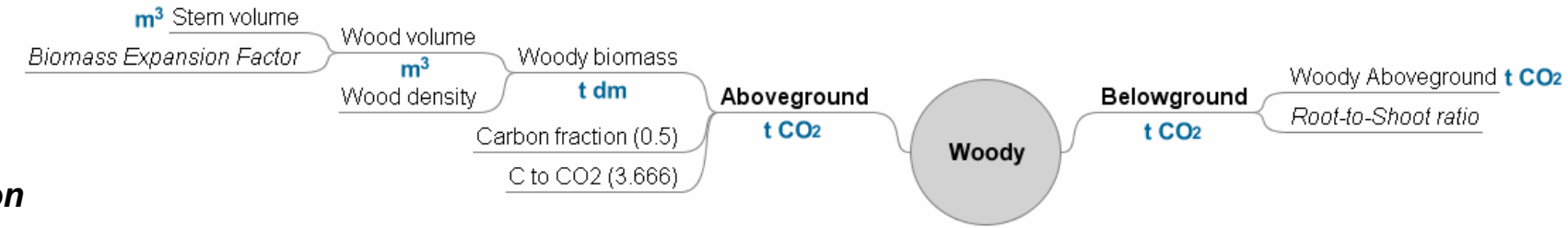
Future CO_2-fixation

Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor
- Woody Belowground = Woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Future CO_2-fixation	= Woody Aboveground + Woody Belowground

Growth-model ID **R1 & R2**		**Adaptive inventories**	**Factors**
Key-figures	Category of calculation: 2) Rotation forestry Time period covered by the growth-model: 20 years Type of calculation used: Mean Stand volume Stand volume: 123,21 m^3 of Stem volume ha	Amount of adaptive inventories: 0	Biomass Expansion Factor: 1,30 Wood density: 0,75 Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 0,42
References	Description of the growth-model: Growth projection based on conservative assumptions. CO2 sequestration calculates according to CFS requirements. Reference of the growth-model: 06-100_summary_CO2_Fix.xls 06-101_Growth model description	Inventories used to adapt the growth-model: -	**Biomass Expansion Factor:** **International default value** Reference: 06-06, page 24 **Wood density: International default value** Reference: 06-05, page 1 **Root-to-Shoot ratio: International default value** Reference: 06-01, page 3168
Comment			Comment
Future CO_2-fixation	**312 tCO_2/ha**		



Future CO_2-fixation

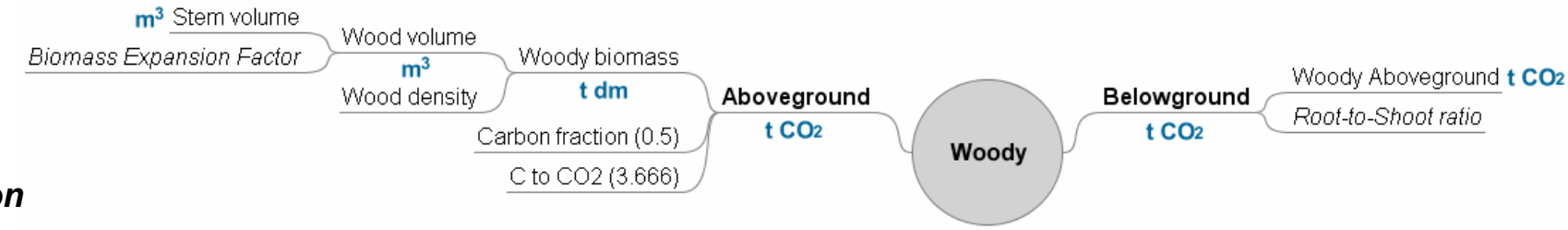
Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor
- Woody Belowground = Woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Future CO_2-fixation	= Woody Aboveground + Woody Belowground

Growth-model ID Mix1		**Adaptive inventories**	**Factors**
Key-figures	Category of calculation: 2) Rotation forestry Time period covered by the growth-model: 1 years Type of calculation used: Mean Stand volume Stand volume: 121,36 m^3 of Stem volume ha	Amount of adaptive inventories: 0	Biomass Expansion Factor: 1.42 Wood density: 0.77 Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 0.42 (mean values weighted by species %)
References	Description of the growth-model: Growth projection based on conservative assumptions. CO2 sequestration calculates according to CFS requirements. Reference of the growth-model: D06-100_summary_CO2_Fix.xls 06-101_Growth model description	Inventories used to adapt the growth-model: -	**Biomass Expansion Factor: International default value** Reference: 06-06, page 24; 06-16, page 3178 **Wood density: International default value** Reference: 06-05, page 1; 06-08, page 446; 06-09, page 1 **Root-to-Shoot ratio: International default value** Reference: 06-01, page 3168
Comment			Comment
Future CO_2-fixation	**344 tCO_2/ha**		

This document will be made publicly available. CO_2-buyers will be able to use this information for marketing purposes.



Future CO_2-fixation

Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor
- Woody Belowground = Woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Future CO_2-fixation	= Woody Aboveground + Woody Belowground

Growth-model ID Cebo		**Adaptive inventories**	**Factors**
Key-figures	Category of calculation: 2) Rotation forestry Time period covered by the growth-model: 20 years Type of calculation used: Mean Stand volume Stand volume: 143 m^3 of Stem volume ha	Amount of adaptive inventories: 0	Biomass Expansion Factor: 1,50 Wood density: 0,35 Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 0.42
References	Description of the growth-model: Growth projection based on conservative assumptions. CO2 sequestration calculates according to CFS requirements. Reference of the growth-model: Document title, Page, Author	Inventories used to adapt the growth-model: Name of reference document, Date of execution, Person in charge	**Biomass Expansion Factor:** **International default value** Reference: 06-16 **Wood density: International default value** Reference: 06-14, page 778 **Root-to-Shoot ratio: International default value** Reference: 06-01, page 3168
Comment			Comment
Future CO_2-fixation	**156.17 tCO_2/ha**		

Baseline

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that the variables used for the calculation follow a conservative approach and*
- *that the amount of $VER_{futures}$ has been accurately calculated according to the CFS formulas.*

$$VER_{futures} = \text{Eligible planting area} * (\oplus \text{Future } CO_2\text{-fixation} \ominus \text{Project emissions} \ominus \text{Baseline} \ominus \text{Leakage})$$

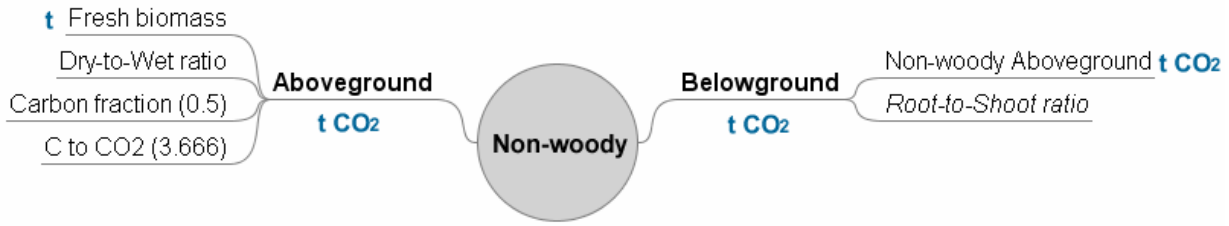
For the calculation of the Baseline the following carbon pools must be determined:

Carbon Pools		***Examples***
Woody	Aboveground	*Stem, branches and bark*
	Belowground	*Tree roots*
Non-woody	Aboveground	*Grass*
	Belowground	*Grassroots*

 The carbon pools Woody and Non-woody must be determined by the best available scientific references.

- Preferably, local default values* shall be used.
- National default values* shall only be used if local default values are not available.
- The same approach counts for international default values*.

* This footnote is only available in the CarbonFix Standard itself.



Baseline$_{non\text{-}woody}$

Selected carbon pools

- Non-woody Aboveground = Fresh non-woody biomass * Dry-to-Wet ratio * Carbon fraction * C to CO_2 factor
- Non-woody Belowground = Non-woody Aboveground * *Root-to-Shoot ratio*

Formula of calculation	
Baseline$_{non\text{-}woody}$	= CO_2-stock (Non-woody Aboveground + Non-woody Belowground) * Area

Category **Non-woody ID1**	**CO_2-stock (tCO_2/ha)**	**Area (ha)**
Figures	Fresh biomass: 6.2 tons / ha (dry biomass) Wet-to-Dry ratio: - Carbon fraction: 0.5 C to CO_2 factor: 3.666 Root-to-Shoot ratio: 1.58-	Area of calculation: 134 ha (Eligible planting area) If, other: Please define further
Reference	**Fresh biomass: National default value** Reference: 07-01_2006 IPCC GfNGGI_Grassland, p. 27 **Wet-to-Dry ratio: -** Reference: Document title, Page, Author **Root-to-Shoot ratio: International default value** Reference: 07-02 - IPCC_GPG_Default_values	
Comment	The eligible planting area has been used as pasture land before the afforestation project started. Forest and shrubland was not removed for growing trees.	
Baseline$_{non\text{-}woody}$	**29 tCO_2/ha**	**Total: 3886 tCO_2**

Baseline emissions are determined by the following formula:

Baseline	***= (Baseline$_{woody}$***	***+ Baseline$_{non-woody}$)***	***/ Foreseen and eligible planting area***
tCO_2/ ha	*= (tCO_2*	*+ tCO_2*	*) / ha*

Types of Baseline	Emissions (tCO_2)
Non-woody-1	3886 tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
SUM	3886 tCO_2
Foreseen and eligible planting area	134 ha
Baseline	**29 tCO_2/ha**

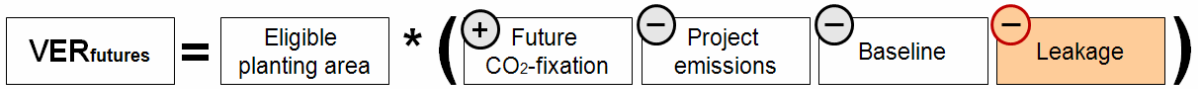
! These results must be transferred to the websystem of the project !

Leakage

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that the variables used for the calculation follow a conservative approach and*
- *that the amount of $VER_{futures}$ has been accurately calculated according to the CFS formulas.*



For the calculation of the Leakage the following carbon pool must be determined:

Carbon Pools		*Examples*
Woody	Aboveground	*Stem, branches and bark*

and The *project* must justify its selection of leakage categories:

a. fuelwood use
b. charcoal burning
c. timber harvesting
d. agricultural farming
e. resettlement
f. livestock grazing

Please select the categories assessed for your *project*:

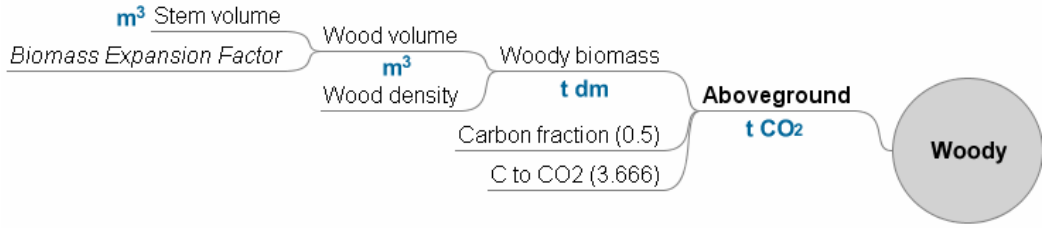
a. ☐ fuelwood use
b. ☐ charcoal burning
c. ☐ harvesting of timber
d. ☐ agricultural farming
e. ☐ resettlement
f. ☒ livestock grazing

Please justify why you have **not** selected certain categories:

Category	Justification
a. Fuelwood use	Fuelwood use has not occured at the eligible planting area before the start of the project as the elibgible planting area used to be pasture land.
b. Charcoal burning	Charcoal burning has not occured at the eligible planting area before the start of the project as the elibgible planting

	area used to be pasture land.
c. Harvesting of timber	Timber harvesting has not occured at the eligible planting area within at least 15 years before the start of the project (see template eligibility)
d. Agricultural farming	Agricultural farming has not been common in the project area before the start of the project since the land was used for livestock grazing.
e. Resettlement	Resettlement is not an issue in the project since the project area has been used for livestock grazing activities and not for settlement in the past .

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.



Leakage$_{(f)}$

Selected carbon pools

- Woody Aboveground = Stem volume * *Biomass Expansion Factor* * Wood density * Carbon fraction * C to CO_2 factor

Formula of calculation				
Leakage$_{(f)}$	= % of displacement	* CO_2-stock (Woody Aboveground)	* Heads	* Capacity

Category **f. Livest.-grazing**	**% of displacement**	**CO_2-stock (tCO_2/ha)** of the area where the activity will be displaced to	**Heads (head)** affected by the project activity	**Capacity (ha/head)**
Figures	0 %	Stem volume: - m^3 BEF: - Wood density: - Carbon fraction: 0.5 C to CO_2 ratio: 3.666 Root-to-Shoot ratio: not needed	200 Cows If, other: Please define further	0,7 ha/head
Reference	Representative survey Reference(s): Personal communication on-site Description: Information was obtained from several stakeholders at the study area, including the former landowner	**Stem volume: Please select** Reference: - **Biomass Expansion Factor: -** Reference: - **Wood density: -** Reference: -	Estimation Reference(s): Personal communication on-site Description: Information was obtained from several stakeholders at the study area, including the former landowner	Reference: Personal communication on-site
Comment				
Leakage$_{(f)}$		**0 tCO_2/ha**		**Total: 0 tCO_2**

Reference document:

CR-BRP_-_Leakage_-_Statement_Isla_Bosques.pdf

Leakage emissions are determined by using the following formula:

Leakage	***= Leakage$_{(a, b, c, d, e, f)}$***	***/ Foreseen and eligible planting area***
tCO_2/ ha	*= tCO_2*	*/ ha*

Types of Leakage	Emissions (tCO_2)
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
Please select -Select ID	- tCO_2
f. Livestock grazing--	0 tCO_2
SUM	0 tCO_2
Foreseen and eligible planting area	134 ha
Leakage	**0 tCO_2/ha**

! This result must be transferred to the websystem of the project !

Management Capacity

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that adequate resources and capacities are available to implement and maintain the project.*

A list of the *management* staff must include the following information:

- Education level
- Work experience
- Duties
- Type of employment
- Title
- GPS and GIS know-how

	Name	Title	Educational level	Duties	Years of working experience	Type of employment	GIS knowledge
1	Stefan Pröstler (Puro Verde) CR	Managing Director	Advanced technical college entrance qualification	Managing Director of Puro Verde Paraiso Forestal. General forest management and coordination of all activities in Costa Rica	7	Full time	Frequent user
2	Harold Moreno (Puro Verde) CR	Executive Secretary	Highschool Bachelor	Assistance, database management, administration and accounting	5	Full time	Occasional user
3	Manuel Hernéndez (HERPA) CR	Managing Director	Forestry Technician Bachelor	Managing Director of HERPA. Coordination of all nursery operations	29	Contract based	Occasional user
4	Jan van der Snee (SOLVE) CR	Managing Director	University entrance qualification	Managing Director of SOLVE Coordination of site preparation, planting activities and maintenance	14	Contract based	Occasional user
5	Leo Pröstler GER/CR	CEO	Graduate Engineer	Managing Director of BaumInvest GmbH & Co KG	40	Full time	No knowledge
6	Michael Metz GER/CR	Project Manager	Diploma in Geography	Project development, responsible for the CO2 and FSC certification process; forest ecology and conservation	10	Full time	Occasional user
7	Tobias Mathow	Forest Scientist	Diploma in	CO2 Calculation, CO2 certification	2	Part time	Expert

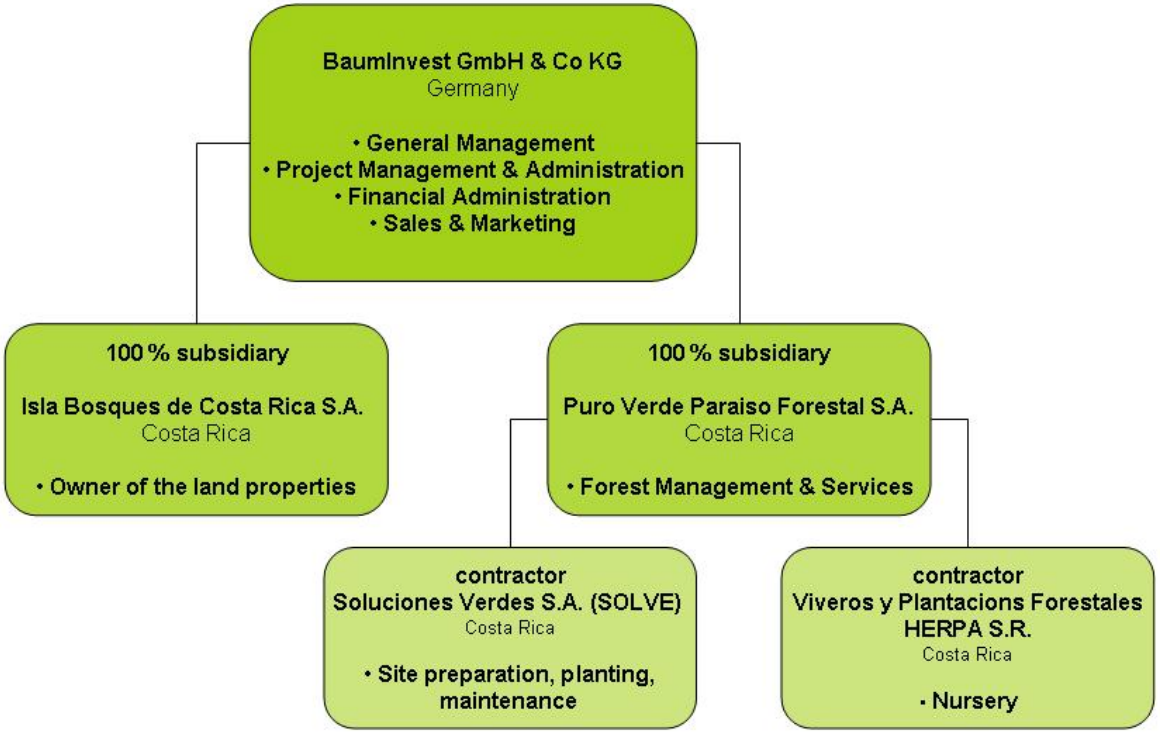
	GER		Forest Science	process			
8	Norbert Stark GER	Administration Manager	Diploma in Sociology	Sales and Marketing, Accounting	12	Full time	No knowledge
9	Stefanie Janssen GER	CEO Assistant	Diploma in Regional Science	Project coordination, Marketing, PR	12	Full time	No knowledge
10	Ever Sequeira Aguinaga (Puro Verde) CR	Manager of GIS department	Bachelor in administracion de empresas	GIS, database, measurement sites/tree inventory	5	Contract based	Expert
11	Carlos Antonio Sequeira (Puro Verde) CR	Accounting	Diploma in administracion de negocios	Controlling, accounting, purchasing / supply management	20	Contract based	No knowledge

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

The *management* structure must be sufficient to the extent of the work. The description must include an organizational chart.

The management structure of BaumInvest is sufficient to cope with the workload related to the present project area of 216 ha. When the project area is extended the management structure will be adjusted accordingly.

Organigram BaumInvest



If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

This document will be made publicly available. CO_2-buyers will be able to use this information for marketing purposes.

The general decision-making process must be described. Decisions shall be implemented in a cooperative way.

The internal decision-making process at the head office in Freiburg (Germany) includes regular team meetings at least once a week in which current topics are discussed and decisions are taken in an open and cooperative manner. More specific topics are discussed and settled in working groups or individually with the managing director. Staff members and contract employees are always invited to bring forward new ideas and their own opinions. The final decision in each case lies, of course, within the scope of responsibility of the managing director of BaumInvest. Substantial decisions concerning BaumInvest GmbH & Co KG must be approved by the advisory board or by convening a meeting of the shareholders.

All relevant decisions concerning the reforestation project in Costa Rica are taken after consultation with the managing director of Puro Verde, subsidiary of BaumInvest in Costa Rica in charge of the forest management and other services. In Costa Rica meetings with the contractors take place at frequent intervals in order to discuss current problems and topics in an open and cooperative way and to decide how to implement the decisions made.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Within this *management* structure, work shall be executed according to the four-eye-principle. This means that two people should always check the quality of the work.

Except for routine jobs and day-to-day business, work at the head office of BaumInvest in Freiburg (Germany) is always double-checked by at least two people; these are usually the staff member in charge and the managing director of BaumInvest. In all cases a minimum of one more person will be informed about relevant activities, either during the regular team-meetings, personally or in carbon copy. In Costa Rica, field operations are always supervised by the managing directors of our contractors and double-checked by the managing director of Puro Verde, the subsidiary of BaumInvest responsible for forest management and other services.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Adapted to the extent of the work, the *management* shall work with Standard Operational Procedures*.
* This footnote is only available in the CarbonFix Standard itself.

Does the extent of your *project* activities show a need of Standard Operational Procedures? No

If so, please state the name of the reference document(s) in the attachment:

 The *project* shall collaboratively cooperate with other organizations or individuals to expand the capacities of the *management*.

Cooperation with other organizations and individuals to expand the capacities of our management and the quality of our work is one of the most salient characteristics of BaumInvest. To name but a few examples on a national level in Costa Rica: We collaborate with the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) and the Instituto Tecnológico de Costa Rica / Centro de Investigación y Desarrollo en Agricultura Sostenible para el Trópico Húmedo (ITCR/CIDASTH) in the fields of forest management, forest economics and agro-forestry; and with the Ecocentro Danaus and Asociación Conservacionista OJOCHE in the fields of forest restoration, conservation and environmental education. In March 2009 the Research Institute and Natural History Museum Senckenberg (Frankfurt am Main, Germany) in cooperation with Globetrotter Ausrüstung (Hamburg, Germany) started a long term survey and monitoring programme to study the biodiversity and population dynamics of the amphibians and reptiles in the project area.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

 The *management* of the *project* shall be able to continuously extend their knowledge and skills within their field of work.

The multi-disciplinary working teams at the head office of BaumInvest in Germany as well as in Costa Rica are small and efficient. Cooperative teamwork and overlapping of different fields of activities have the positive effect of an on-the-job training, where each member of the team benefits from the knowledge and skills of the others. The participation of our staff members in relevant conferences, workshops, round tables and experts' meetings at national and international level continually improves our capacities. Furthermore, local and international experts, e.g. from our co-operation partners, frequently visit our project area, which is always a very good opportunity for an exchange of information and experience. Staff members of BaumInvest are invited to take advantage of appropriate training opportunities to further improve their knowledge and skills.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Financial Capacity

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Only this part of the document has to be filled out if your project is CCBS[*] certified.

Please insert the page numbers of the PDD certified and published by the CCBA where the information about the fiancial aspects can be found:

Pages: e.g. 2-12; 15; 34-37

Sufficient evidence must be given to the certification body to be able to confirm

- *that adequate resources are available to implement and maintain the project.*


The *project* must give evidence of its financial health by the provision of:

- financial reports from the past 3 years, or
- a statement of an independent accountant.

CR-BRP_-_Attachment_-_Financial_Report_2007.pdf
CR-BRP_-_Attachment_-_Financial_Report_2008.pdf

[*] CCBS = Climate Community Biodiversity Standard: www.climate-standards.org/projects

Technical Capacity

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that adequate resources and capacities are available to implement and maintain the project.*

A list must describe the equipment used for the following activities:

a. Nursery
b. Land preparation (incl. lining out /spacing)
c. Planting
d. Beating up (replacing of dead seedlings)
e. Maintenance
f. Pruning
g. Thinning
h. Harvesting
i. Security (fire, animals, etc.)

Equipment	Amount	Type of ownership	Category / Purpose
planting shovel	4	Owned by third	a - scoop out soil to prepare the ground
wheelbarrows	2	Owned by third	a - moving of soil, equipment, plants etc.
backpack pump	1	Owned by third	a - application of organic fertilizers
machete	4	Owned by third	a - manual weed and shrub control
rubber mallet	1	Owned by third	a - preparation of seedling beds
water pump	1	Leased	a - irrigation of seedlings when necessary i - fire protection
motorized hole diggers	2	Owned by third	b - digging holes for planting the seedlings
trimmer Shindaiwa 150	4	Owned by third	e - weed control
cars (four-wheel-drive)	2	Owner	j - general transportation of passengers, equipment and materials; controling
tractor with trailer	1	Owner	a - e according to its implements used for many different purposes
ripper roughline	1	Owner	b - land preparation
trimmer Kodiak	1	Owner	e - trimming timber
chipper	1	Owner	e - processing of organic materials to produce compost or organic pesticides
tiller or cultivator	1	Owner	a - production of soil for the nursery
water pump	4	Owner	a - irrigation of seedlings when necessary e - supply of water and fire protection
wheelbarrow	1	Owner	a - moving of soil, equipment, plants etc.
hammer	4	Owner	e - for different maintenance purposes
hand saw	2	Owner	f - pruning
macana	2	Owner	b - tool for digging holes, e.g. posts for fences
lining ropes (200m)	2	Owner	b - lining out por planting
handle spade	1	Owner	b - tool for digging holes, e.g. posts for fences, colecting soil samples
wire cutters	20	Owner	e - different purposes
chain saw	3	Owned by third	b, e, g, g - different wood cutting activities
ATV with trailer	1	Owner	j - transportation of equipment and materials, field visits and inspections
pruning saw	5	Owner	f - to ensure quality timber j - reduce fire risk
computer	2	Owner	j - forest management, planning and documen-

			tation of field activites, communication etc.
global positioning system (GPS)	1	Owner	j - forest management, navigation, mapping, land survey, GIS etc.
weather station	1	Owner	j - observation and documentation of weather conditions
camera	1	Owner	j - documentation
cell phones	2	Owner	j - coordination, communication, e.g. in case of an emergency etc.

Comment: Of course, this list of equipment is not exhaustiv and changes very quickly. At this early stage of the project, special equipment, e.g. for maintenance, thinning and harvesting, is not required so far and will be made available later. Many pieces of the equipment are used for different purposes, for which reason it was sometimes difficult to relate with the given category. If the selected type of ownership is "owned by third", the equipment belongs to our contractors SOLVE or HERPA.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Protective Capacity

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that adequate resources and capacities are available to implement and maintain the project.*

Describe the different risks, their likelihood and the ways of mitigation.

Category	Description	Likelihood	Way of mitigation
Browsing (domestic animals)	Roaming cattle and horses might cause damage especially to young trees	Low risk that it will occur	The project area is completely fenced and fences are controlled continuously. Swinglia glutinosa is beeing planted as living fence which will replace the barbed wire fence.
Wind	Damage caused by wind-break	Low risk that it will occur	Sites for reforestation are thoroughly selected to mimimize the risk of wind-break. High risk areas with strong winds or exposed to hurricanes, e.g. at the caribbean coast, are excluded.
Drought	Drought reduces tree-growth, makes the plants vulnerable to disease and increases fire risk	Low risk that it will occur	The project area has a total annual percipitation of more than 3000 mm with perennial rainfall and a minimum of 80 % humidity even in the dry season with less percipitation. The risk of drought or fire therefore is very low. However, a 5 m wide firebreak along the boundaries is beeing maintained.
Flood	Inundation might reduce tree-growth and makes plants vulnerabel to disease.	Low risk that it will occur	When heavy rainfall occurres, the water is ususally drained off very quickly. However, the few areas that might be affected from floodings (depressions and flood plains) are excluded from the planting area.

Tree disease (insect)	Tree disease as insects, fungus, virus etc. may cause severe damage to forest plantations.	Medium risk that it will occur	The best way to prevent pests and disease in forest plantations is to use site adapted tree species according to the given climatic conditions and soil quality. BaumInvest established its plantations with at least 50 % native tree species in mixed stands, to create a micro habitat close to natural forests. Workers on our plantations receive special training in phytosanitary inspections to be able to recognize tree disease at an early stage. The conservation areas within and surrounding our project area harbor a great diversity of insectivorous birds, bats and other useful organisms which are integral part of our integrated pest management, where only natural organic pesticides are used if necessary. Solely in extraordinary cases, when our forest plantation or mayor parts of it are at risk to be severely damaged; chemical pesticides might be utilized for pest control according to the limitations prescribed by the Forest Stewardship Council.

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

Projects that are situated in areas with a high fire risk must have a 'Fire Management Plan'.
This plan must consider the actions for:

a. Fire awareness
b. Fire prevention
c. Fire equipment
d. Fire detection
e. Fire suppression
f. Fire damage rehabilitation

The fire risk can be calculated according to the 'Fire risk' guideline GUIDELINE: ... (still under development)

Is your project situated in an area with high fire risk? No

Secured Land Tenure

Name of the Project: BaumInvest Reforestation Project
Project code: CR-BRP

Sufficient evidence must be given to the certification body to be able to confirm

- *that secured land tenure is given for the projects long-term implementation.*

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and A description of the *project area's* land tenure must be given.

The project area consists of two adjacent properties covering a total area of 216,5 ha, located in the district of Pocosol de San Carlos (Province of Alajuela) in the Northern Zone of Costa Rica. The former legal owner of the properties was Ganadería Quesada y López S.A. The first property with entry in the national land registry No. 170817-000 covering 126,86 ha was purchased by Isla Bosques de Costa Rica S.A. - 100 % subsidiary company of BaumInvest GmbH & Co KG - on May 21st, 2007. The second property with entry in the national land registry No. 408411-000 covering 89,67 ha was purchased by Isla Bosques de Costa S.A. on December 31st, 2007. The land acquisition was agreed by contract and is notarially certified. Both properties are properly registered for Isla Bosques de Costa Rica S.A. in the national registry, which is publicly available in the internet.

Official documentations must confirm that the *project owner* is the

- land owner,
- owner of the timber, and
- owner of the CO_2-rights

of the *project area*.

If the *project owner* is not all or none of the above, evidence must be given that the respective land owner, owner of timber, or owner of CO_2-rights of the *project area* agrees with the foreseen *project* activities under the CFS.

Please select the type of ownership the project owner has:
☒ land owner
☒ owner of the timber
☒ owner of the CO_2-rights

Name of the attached document(s) which confirm the type of ownership selected:
CR-BRP_-_Attachment_-_Secured_Land_Tenure.pdf
CR-BRP_-_Attachment_-_Isla_Bosques_de_Costa_Rica.pdf
BRP_Statement_Environmental Authority_MINAET.pdf

If not all of the above were selected, please give evidence that the respective land owner, owner of timber, or owner of CO_2-rights agrees with the foreseen *project* activities under the CFS.

If any relocation of people is required, it must be done on a voluntary basis or help to resolve land tenure problems.

Has any relocation of people been necessary? No

If so, please describe in detail how the relocation took place:

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

If there are encroachment activities or a possibility of it, it must be described and mitigated in a cooperative way.

Is there a possibility of encroachment on the project area? No

If so, please describe in detail how it is mitigated:

If the information above has any references, please state their title(s).
Reference documents must be uploaded in the respective attachment folder, reference pictures on the projects website.

BaumInvest

Reforestation Project

Certified:

BaumInvest has established a remarkable ecologically and socially sound reforestation project with tropical precious woods in Central America. The aim of the project is to reforest pasture land previously used for extensive cattle ranching in northern Costa Rica using mixed stands of various indigenous tree species as well as teak. The project area covers 216 ha within the biosphere reserve 'Agua y Paz' recognized under UNESCO's Man and the Biosphere programme. It constitutes part of the habitat of the magnificent *Great Green Macaw* and other endangered species.

The project will provide secure, long-term employment and fair working conditions for the local population in this rural area of northern Costa Rica. Smallholders may also have access to the project area in order to practise small-scale agro forestry between the trees. This provides them with an additional means of securing their livelihoods. The smallholders can obtain advice from BaumInvest as well as support in the form of microcredits and in respect of marketing their produce. About 30 percent of the project area have been set aside exclusively for nature protection. In these parts, remaining natural forest and wetlands will come under permanent protection and they will be connected with each other by means of biological corridors for wild animal and plant species.

Certified by the CarbonFix Standard in October 2008. More information under: www.CarbinFix.info/AAP

TÜV SÜD

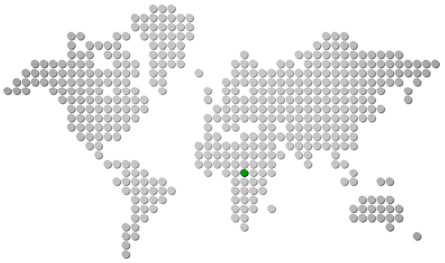
TÜV as a UN accredited certification body has certified the project according to the CFS and CCB standards.

www.CarbonFix.info/BRP

Climate Forestation Project

BaumInvest Reforestation Project

High quality CO_2-certificates from new forests



GPS coordinates
10°44'00" N - 84°30'00" W

Costa Rica – *first choice for reforestation projects*

Costa Rica, located on the Central American isthmus, is a middle-income, developing country with a strong democratic tradition. Costa Rica's major economic resources are its fertile land and frequent rainfall as well as its well-educated population. Our choice of Costa Rica for the launch of our long-term reforestation project reflects the ideal combination of political, economic and climatic conditions. On a local level, the BaumInvest Reforestation Project enjoys excellent relations with the nearby village of San Rafael and its population, which also supplies most of the labour needed for the operation. This creates an atmosphere of mutual trust, thus further increasing our reforestation project's prospects of success.

Professional Forest Management – *guided by nature*

An ideal combination of species selection and a comprehensive care programme is a matter of great importance to BaumInvest. By growing various indigenous tree species in mixed stands on at least 50% of the cultivated land and applying strictly ecological principles of husbandry we can rely on healthy growth and a stable, near-natural development of the tree stocks. Another important success factor consists in the long-term, professional experience of our employees together with the assistance of local and international experts.

Project area:	1216 hectare	**Certified tCO_2:**	2??? tCO_2
Planted trees:	1??? trees	**Still available:**	1??? tCO_2
People employed:	??? people	**Prices:**	On demand
Planted tree:	native tree species and teak		

BaumInvest - *more than trees*

BaumInvest has its headquarters in Freiburg/Germany. It upholds the principles of sustainable forest management which exemplary combine economic feasibility with social and ecological responsibility.

A remarkable number of well-known personalities and companies are involved in the BaumInvest Reforestation Project as founding investors. Further contributions have come from many private investors and partners. Following the successful launch of the BaumInvest Reforestation Project, further reforestation projects in Costa Rica are already in preparation.

BaumInvest
RENDITE MIT VERANTWORTUNG

To learn more about our project, visit us at www.CarbonFix.info/BRP. Here, you will have detailed information about the project and the CO_2-certificates we offer.

BaumInvest GmbH & Co. KG • Freiburg • Germany • www.bauminvest.de • info@bauminvest.de