Plan Vivo Annual Report

HINIDUMA BIO-LINK PROJECT, SRI LANKA

Reforesting traditional home gardens using the analog forestry concept

in the wet zones of Sri Lanka

Submitted by:

Conservation Carbon Company (Pvt) Ltd, Sri Lanka

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conservation carbon company.

Bringing economic, social & enviromental principles into the development of carbon markets.

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1 Summary

This following report summarizes the important steps taken in the Hiniduma Bio-link Project between August 2012 and December 2013.

The Conservation Carbon Company (CCC) continued to improve the program's administrative and management systems by regularly updating the database and improving the tracking of carbon payments along with the payment of farmers. The introduction of Phase III of the Hiniduma Bio-Link project was the highlight of the year. Phase III of the project consists of 17 new farmers who are currently managing 7.8 Ha of land with 38 rain forest flora species. The extension was done in collaboration with MAS Linea Aqua and Expo Lanka holdings. Each company planted 1000 seedlings and pledged to fund the maintenance cost of the plants for 3 years. 1008 tonnes of CO2 will be sequestered through the Phase III extension

CCC encourages farmers to raise seedlings by managing nurseries as a business. Although there is growing interest amongst other farmers to join the program, the recruitment of more farmers will depend on the availability of carbon buyers. The project has been expanded within its current operational area. A baseline survey and the planting of trees within the area have been concluded.

The following Annual Report records the progress of the Hiniduma Bio-link Project in Sri Lanka, submitted to the Plan Vivo Foundation.

Reporting period		1st August 2012 to 31stDecember 2013	
Technical specifications in use		Mixed species reforestation	
Area under management (ha) i.e. implemented *plan vivos*	Areas put under management since last report (ha)	18.8 ha	Addition to the previous plot(s) 7.8 ha
Smallholders with *plan vivos* and PES agreements (total for project)	New smallholders with PES agreements since last report	32 smallholders	17 smallholders as new
Total PV certificate issued		1,759	
Total payments made to community fund up to 31st December 2013		$ 3670.25	
Submission for Certificate Issuance for new areas under management (tCO_2)		1008	

2 Key Events and Developments and Challenges

2.1 Key Events

2.1.1 Awareness sessions

The key events conducted by the Conservation Carbon Company in the current reporting period have been:

Farmer training sessions

Awareness sessions were held for all the farmers engaged with Hiniduma Bio-link Project. Below is an image of the awareness session held on the 11th of November 2013 at Farmer Siripala's house with the participation of newly joined farmers for the phase III of the project.

Candidate of Ms.Earth – Sri Lanka participating in tree planting

A candidate of Ms. Earth Sri Lanka along with 10 children replaced 50 plants at Hiniduma in August 2013. The tree planting initiative was requirement of the Ms. Earth pageant and it was based on the theme "Growing with nature".

The staff members of CCC together with the Forestry Department conducted an awareness program for the children prior to the planting of trees.

CCC launches Geo-tagging system for Miss Earth finalist

Miss Sri Lanka for Miss Earth contestant finalist Monali Dissanayake with Hiniduma Bio Link Project Manager Lakmini Senadheera and The Carbon Consulting Company COO Sanith de Silva Wijeyeratne

Along with the planting of trees, CCC launched a Geo mapping system that can track the position of clusters of plants.

2.1.2 Operations developments

A team of students studying land surveying at ESGT, le Mans, France, engaged in mapping the land of the Hiniduma Bio-Link project as a partial requirement of their degree programme. They spent their two month internship mapping more than 15 land parcels that included new smallholding(s) and existing smallholding(s) from phase I and phase II of the project. CCC is in the process of Geo-referencing these maps to model the existence of the Hiniduma- Bio-link on the geographical map.

Expolanka joins Hiniduma tree planting initiative

From left: Signing of agreement for Hiniduma project by Carbon Consulting Company Chief Operating Officer Sanith Wijeyeratne, Expolanka Holding PLC Head of Marketing, Corporate Communications and CSR Paddy Weerasekera, Expolanka Holdings PLC Senior Executive CSR Sajeeth Ilyas

MAS Linea Aqua joins CCC in groundbreaking Rainforest Project

2.1.3 Fundraising for the Expansion of the Biolink:

CCC was able to initiate Phase III of the Hiniduma Bio-link by planting 2000 seedlings in new smallholding(s) within the area. MAS Linea Aqua and Expo Lanka Holdings contributed towards the Bio-link in 2013 by planting 1000 plants each. Both organizations made a commitment to fund the maintenance cost of those plants for 3 years. The 2000 plants, consisting of 38 different rain forest species, were planted on 18 smallholding(s) belonging to 17 farmers.

Farmer Anura Weerasinghe, a joint owner of one of the Bio- link plot(s), gave his consent to link one acre of his plot with the neighbouring plot of land (near Gin Ganga) for Phase III of the Bio-link project.

2.1.4 Technical improvements:

Conservation Carbon Company is currently developing a data base to integrate the monitoring results into the main project database. Through the database, the performance of the project can be tracked on all levels. Information regarding the land, the dates and the producer will also be included in the database.

3 Organizational developments

3.1.1.1 Human resources:

There has been a change in the ground level supervision of the project. Although Rainforest Rescue International (RRI) has been monitoring the *Plan Vivo* projects in that area, there were some internal structural changes within RRI that has led to their project coordinators to hand over the monitoring and supervision of the Hiniduma Bio Link project to CCC for this year only, while they finalise their changes. CCC has recruited a separate project coordinator to handle the ground level activities and facilitate the services to the community.

3.1.1.2 Species-specific biomass equations:

CCC experts have gathered the necessary data to revise the species specific biomass equation thus the carbon calculations.

4 Key challenge

Farmers are reluctant to participate in the Bio-link project because the trees that are planted for the project do not have any commercial value. For instance, the farmers participating in Phase III of the Bio-link project requested to cultivate fruits trees and trees with timber value. As a result of such complications, it is difficult to find land parcels to expand the Bio-link project.

4.1 Relationship with the community and the producers

Once in three months the farmers received their payment through the project coordinators and matters arising from the project were discussed with the coordinators. One main problem pertaining to the famers was the replacement of dead plants. CCC decided to replace dead plants with new ones by retaining a sum of the farmer's total payment.

5 Achievements of the project and project promotion

5.1.1 Publications

Scientific research: A scientific research was conducted by a student from the Faculty of Agriculture , University of Peradeniya, Sri Lanka on the topic of "**Viability of small-holder agro-forestry as a supplier of voluntary carbon market: a case of low land wet zone smallholding landowners in Bio-link corridor project in Hiniduma".** The research paper is a partial fullfillment requirement for the degree in Science and Agircultural Mangement (Bs) from the Business Management Department of Agricultural Economics and Business Management.

5.1.2 Awards

The Easwaran Brothers company that funds one part of the Hiniduma Bio-link project was awarded a certificate under the "The Best Sustainability Project Award" at The Best Corporate Citizen Sustainability Awards, 2013, organized by the Ceylon Chamber of Commerce.


SUSTAINABILITY MANAGEMENT IS RISK MANAGEMENT
SEE PAGGE 18

DIMO, Standard Chartered Ban
shine brightest at CSR awards

5.1.3 Media Coverage

Revamping the web

Project in order to increase the involvement of those interested in the project (funding, buying certificates etc) , Conservation Carbon Company has taken steps to revamp the Hiniduma web site by including more information regarding the project.

5.1.4 Partnering with UNOPs

CCC was the first customer of the Sri Lankan hub of Commonwealth Environmental Investment Platform (CEIP) launched on the 18th of November, 2013 by Minister of Industry and Commerce. Using this platform, CCC will be able to promote the Hinduma Bio-link project to potential investors.


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6 Activities, total project size and participation

6.1 Summary of total participation and project size

The following data represents the scale of the project to date.

Vintage			Cumulative values
2012	The total number of producers with registered PES agreements:	15	15
	The total area covered by the project:	11 ha equivalent	11 ha
2013	The total number of producers with registered PES agreements:	17	32
	The total area covered by the project:	Approximately 7.8 ha	18.8 ha

6.2 Strengthening of Program Management

The program was strengthened by improving database management and streamlining payments to farmers (in view of reducing transactions costs).

6.3 Casualty replanting

50 dead plants were replaced in July, 2013 under the programme “Growing with Nature” One of the candidates for Derana Veet Ms. Sri Lanka for Ms Earth Pageant was involved in the project. 42 plants were replaced at Mr P.L. Amarapala’s farmland and the rest were planted at Mr P.L. Kumaradasa’s farmland.

The farmers agreed to replace the dead trees at their expense. However, the farmers who had not planted their trees for unknown reasons were not paid. It was made clear to them that they would receive payment provided they plant the trees by next year’s monitoring session.

6.4 Protection

Although polythene covers were used to protect the seedlings from wild animals, it came to our notice that the polythene covers were inhibiting the growth of the seedlings during the rainy season. Therefore, the polythene covers are not been used for the new smallholding(s) thus we have asked smallholders to fenced the plants with small twigs.

6.5 Monitoring *plan vivos*

The annual monitoring session of *plan vivos* at Bio-link was conducted in June 2013. The monitoring team consisted of CCC staff members, students from Sabaragamuwa University of Sri Lanka and 2 volunteers from National University of Singapore. 50% monitoring was done on the majority of the smallholdings.

7 Submission for Plan Vivo Certificate Issuance

Farmer No	Producer/ Producer Group name or ID number3	Description	
		System (name of tech spec)	Area (ha)
P3-2011-225-06	P.P.G. Albert I	Mixed species reforestation	0.304
P3-2011-225-07	P.P.G. Albert II	Mixed species reforestation	0.304
P3-2011-225-08	P.P. Siripala	Mixed species reforestation	0.194
P3-2011-225-09	P.L. Seneviratne	Mixed species reforestation	0.405
P3-2011-225-10	W.A. Sardhasena	Mixed species reforestation	0.405
P3-2011-225-11	Lasika	Mixed species reforestation	0.304
P3-2011-225-12	H.L. Ananda	Mixed species reforestation	1.012
P3-2011-225-13	KaluAia	Mixed species reforestation	0.304
P3-2011-225-14	S.S.R. Lusina	Mixed species reforestation	0.506
P3-2011-225-15	Anura Liyanage	Mixed species reforestation	0.405
P3-2011-225-16	Buddike	Mixed species reforestation	0.304
P3-2011-225-17	Gamini Godakanda	Mixed species reforestation	0.506
P3-2011-225-18	S.A.K. Sunil Jayantha	Mixed species reforestation	0.506
P3-2011-225-19	P.P. Wimalasena	Mixed species reforestation	0.202
P3-2011-225-20	S.G. Amarasinghe	Mixed species reforestation	1.619
P3-2011-225-21	Sarath Jagoda	Mixed species reforestation	0.405
P3-2011-225-22	P.L. Premasiri	Mixed species reforestation	0.121

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

7.1 Plan Vivo certificates Calculation for the new *Plan vivo's*

CCC technical consultants have done continuous research on adjusting the species' specific biomass equations. Furthermore, we have adjusted the calculations and kept a buffer of 15%. It was observed that the readjusted growth models with the real time data collected through the monitoring process has shown an improvement. According to the experts, the readjusted growth models for the given plant list for Phase III exertions are shown in Table 1.

In addition, CCC experts managed to identify fast-growing species and those with high carbon sequestration potential as well.

Table 1: Tot carbon benefits for individual species

Scientific Name	Total Plants	Total tonnes of CO_2 for tree species
Carallia brachiata	94	68.14891487
Syzygium aromaticum	4	0.776908446
Loxococcus rupicola	23	3.594339513
Madhuca longifolia	90	18.83548715
Caryota urens	10	1.981845248
Azadirachta indica	39	6.178231058
Canarium zeylanicum	51	124.7867054
Berrya cordifolia	15	11.48889283
Vateria copallifera	123	88.76954153
Psidium guajava	5	0.371521381
Dipterocarpus zeylanicus	288	207.8506338
Artocarpus altilis	34	85.43669964
Syzygium javanicum	83	18.16963774
Mesua thwaitesii (ferrea)	137	32.26332138
Mangifera zeylanica	108	40.91609942
Shorea affinis	68	21.83016297
Mangifera indica	52	23.81313592
Annona reticulata	3	0.769933327
Syzygium samarangense	20	4.378225962
Terminalia bellirica	10	1.308329301
Shorea afinis	10	3.210318083
Durio zibethinus	120	81.83123851
Artocarpus nobilis	76	190.9761521
Garcinia mangostana	33	12.2408777
Mesua nagassarium	114	36.78663197
Palaquium petiolare	16	8.332936208
Vitex altissima	4	1.686247819

Dillenia triquetra	1	0.294489984
Dillenia retusa	4	1.456990784
Shorea zeylanica	5	1.605159042
Nephelium lappaceum	118	59.39721596
Theobroma cacao	81	3.604784146
Persea americana	12	7.259274428
Shorea dyeri	21	6.741667975
Citrus sinensis	57	4.189872454
Terminalia arjuna	29	3.794154973

Following table shows the additional Carbon benefits generated through this vintage.

Table 2: Carbon benefits Calculation for the year 2013

Producer ID	**Produce Name**	**Tones CO_2 (**after allocation of 15% buffer stock)
P3-2011-225-06	P.P.G. Albert I	19.50
P3-2011-225-07	P.P.G. Albert II	57.45
P3-2011-225-12	H.L. Ananda	58.45
P3-2011-225-14	S.S.R. Lusina	83.48
P3-2011-225-11	Lasika	62.01
P3-2011-225-13	Kalu Ayya	57.63
P3-2011-225-10	W.A. Sardhasena	67.58
P3-2011-225-09	P.L. Seneviratne	38.70
P3-2011-225-08	P.P. Siripala	37.62
P3-2011-225-17	Gamini Godakanda	102.16
P3-2011-225-18	S.A.K. Sunil Jayantha	82.72
P3-2011-225-15	Anura Liyanage	52.38
P3-2011-225-16	Buddika	14.94
P3-2011-225-19	P.P. Wimalasena	15.23
P3-2011-225-20	S.G. Amarasinghe	174.97
P3-2011-225-21	Sarath Jagoda	55.52
P3-2011-225-22	P.L. Premasiri	26.97
	Total	**1007.32**

According the calculation we have we have kept an additional **178 tCO_2** (15%) aside for the risk buffer.

8 Sales of Plan Vivo Certificates

Table 3: Credit certificates update for 2013

Vintage	Name of purchaser/source of funds	Number of Plan Vivo Certificates purchased	Price per Certificate ($)	Total amount received ($)
2012	Marks and Spencer Plc, UK	1500		
2012	Standard Chartered Bank, Sr8i Lanka	40		
2013	Credit transfer to **ZeroMission AB**, Sweeden	68		

NB/ Individual pricing information supplied to the Foundation will be for internal purposes only.

Table 4: Summary of the Carbon benefit of Hiniduma Bio Link Project up to 2014

Total tonnes CO_2 generated for new vintage	**1186 ton CO_2**
Unsold certificates from previous issuance	151 ton CO_2
Total Risk buffer 310 (2012 AR) + 178 (2013 AR)	488 ton CO_2
Total certificate sales to date	1608 ton CO_2
Balance of unsold certificates (1008 ton CO_2 and 151 ton CO_2)	**1159 ton CO_2**

Table 5: Summary of monitoring results

Farmer No	Producer/ Producer Group name or ID number3	Area (ha)	Total number of Trees	Percentage of area under sampling	Sample Area	Number of Plants Monitired in Sample Plot	Number of dead Plants	Survival rate (%)
P1 -2009-225-01	Karunadasa	0.404	173	50%	0.202	80	7	93
P1 -2009-225-02	UpulRanaweera	0.404	457	50%	0.202	194	35	85
P2-1210-225-01	AjithNiranjan I	0.455	246	50%	0.228	49	74	40
P2-1210-225-02	AjithNiranjan II	0.455	242	50%	0.228	45	76	37
P2-1210-225-04	G.G Dalapala	0.405	277	50%	0.203	68	71	49
P2 1210-225-05	G. Weerasinghe	2.43	1576	50%	1.215	441	347	56
P2-1210-225-07	W.G. Gunasiri	0.425	209	50%	0.213	61	44	58
P2-1210-225-08	S. H. Subasena	2.83	1642	50%	1.415	558	263	68
P2-1210-225-09	T.P.G Sunil	0.202	285	50%	0.101	104	39	73
P2-1210-225-10	P L Wijedasa	1.62	810	50%	0.810	312	93	77
P3-2011-225-01	L.Wijesekara	1.45	600	50%	0.725	153	147	51
P3-2011-225-02	P L Jayasena	0.405	300	50%	0.203	98	52	65
P3-2011-225-03	K. H. Nalin Kumara	0.405	300	50%	0.203	53	97	35
P3-2011-225-04	P.L Amarapala	0.607	450	50%	0.304	162	63	72
P3-2011-225-05	P. L Kumaradasa	0.202	150	50%	0.101	61	14	81

8.1 Monitoring overview

The monitoring process this year involved taking a random sampling of each producer's parcel through a series of sample plots. We counted the number of trees found in the plot center. This year's payments were based on the survival rates of the plants.

Due to the severe drought during the last few months, the weaker plants have died. However, aaccording to the farmer contracts, they are obliged to replace dead plants on their own after the 1st gap filling process. The monitoring team has identified a few farmers who have already started replacing the dead trees and therefore, the project coordinators decided to give more time to the others to complete the replanting.

To overcome this negative aspect, the project will distribute more mature seedlings in future and introduce more effective protection for young plants.

9 PES update

9.1 Payments to producers

The following is a table of the total producer payments for this year 2013. These payments include the gross payment minus the payment deductions made for not meeting the set Key Performance Indicator (KPI) for the producers. However, the amount deducted from their payment will be paid as soon as they fulfill the conditions according the prior agreement.

Table 6: PES payments to producers to date Payments to date

Farmer No	Farmer Name	Payment year 2012 August to 2013 December		Payment up to August 2012	Total up to December 2013
		Payment up to now (Rs)	Payment up to now ($)		
P1 -2009-225-01	Karunadasa	7756	58.76	58.73	117.49
P1 -2009-225-02	UpulRanaweera	18739	141.96	141.68	283.64
P2-1210-225-01	AjithNiranjan I	4785	36.25	57.81	94.06
P2-1210-225-02	AjithNiranjan II	4362	33.05	55.96	89.01
P2-1210-225-03	W Ariyarathne	-	-	9.19	9.19
P2-1210-225-04	G. G. Dalapala	7408	56.12	81.03	137.15
P2 1210-225-05	G. Weerasinghe	44008	333.4	352.37	685.77
P2-1210-225-07	W.G. Gunasiri	5273	39.95	34.67	74.62
P2-1210-225-08	S. H. Subasena	49362	373.96	273.78	647.74
P2-1210-225-09	T.P.G Sunil	10607	80.36	89.93	170.29
P2-1210-225-10	P L Wijedasa	30346	229.89	216.67	446.56
P3-2011-225-01	Leelaratna Wijesekara	14413	109.19	125.21	234.4
P3-2011-225-02	P L Jayasena	8563	64.87	66.13	131
P3-2011-225-03	K. H. NalinIndra Kumara	6011	45.54	61.37	106.91
P3-2011-225-04	Liyanage Amarapala	16159	122.42	137.28	259.7
P3-2011-225-05	P. L Kumaradasa	6140	46.51	45.88	92.39
P3-2011-225-06	P.P.G. Albert I	855	6.43	-	6.43
P3-2011-225-07	P.P.G. Albert II	1425	10.71	-	10.71
P3-2011-225-08	P.P. Siripala	1305	9.81	-	9.81
P3-2011-225-09	P.L. Seneviratne	1215	9.14	-	9.14

P3-2011-225-10	W.A. Sardhasena	2055	15.45	-	15.45
P3-2011-225-11	Lasika	1770	13.31	-	13.31
P3-2011-225-12	H.L. Ananda	1725	12.97	-	12.97
P3-2011-225-13	KaluAia	1665	12.52	-	12.52
Total		245948	1862.56	1807.69	3670.25

10 Ongoing Community Participation

In order to clearly communicate with the project participants, Conservation Carbon Company along with RRI implemented the following:

10.1 Planting manuals

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

10.1.1 Community meetings

Community based meetings regarding the bio-link project were once in last three months. The minutes of the meeting are included in the annexure.

10.1.2 Issues raised in community meetings

In discussion with the participants, they often asked us to give fruit trees, commercially valuable timber trees and an increase in payment. Project coordinators have decided to provide more native fruit trees which have an ecological enhancement as well.

11 Breakdown of operational costs

The following table provides an overview of all operational costs connected to the project pilot phase from the 1st of December, 2012 –31st of December, 2013.

Expense	Description	Cost (US$)
Project salaries	Project officers payments	3195.49
Travel	Travel to project site	299.62
Stationary& other expendable	Accommodation/food	868.45
Training	Farmer Training programmes	601.50
Total		4,965.07

12 Future Development

12.1 Developing Community Based Organizations

CCC and RRI are still in the process of developing a Community Based Organization (CBO). The CBO will consist of all project farmers within the community. Once the CBO is well established, it will be the main community interface for project activities including monitoring and evaluation with project field staff.

12.2 Scaling up

We aim to scale up from 11 to cumulative 50 hectare by next year's planting season. We will make this increment depending on the demand from producers and buyers alike. We are confident that our organization is ready for a change in scale.

The Hiniduma Bio- Link Project Team

Subramaniam Eassuwaren – Director, Conservation Carbon Company

Charith Senanayake – Managing Director, Rain Forest Rescue International

Lakmini Senadheera – Project Coordinator, Conservation Carbon Company