



Valuing Livelihood and Ecosystem Benefits of Rainforest for Climate Change Mitigation: *A success Story of Hiniduma Bio-Link in Sri Lanka*

Lakmini Senadheera

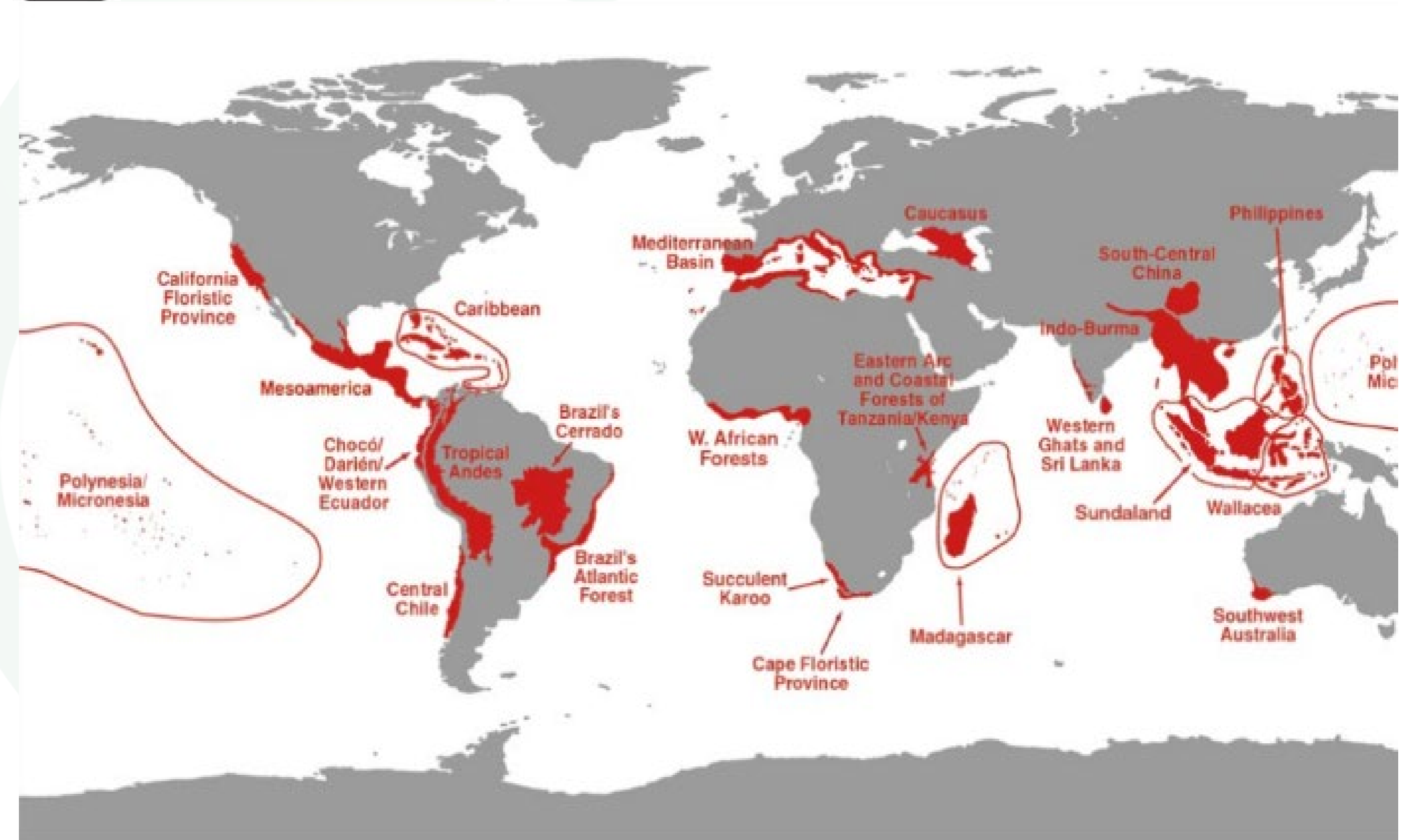
Manager Sustainability Solutions
Carbon Consulting Company, Sri Lanka

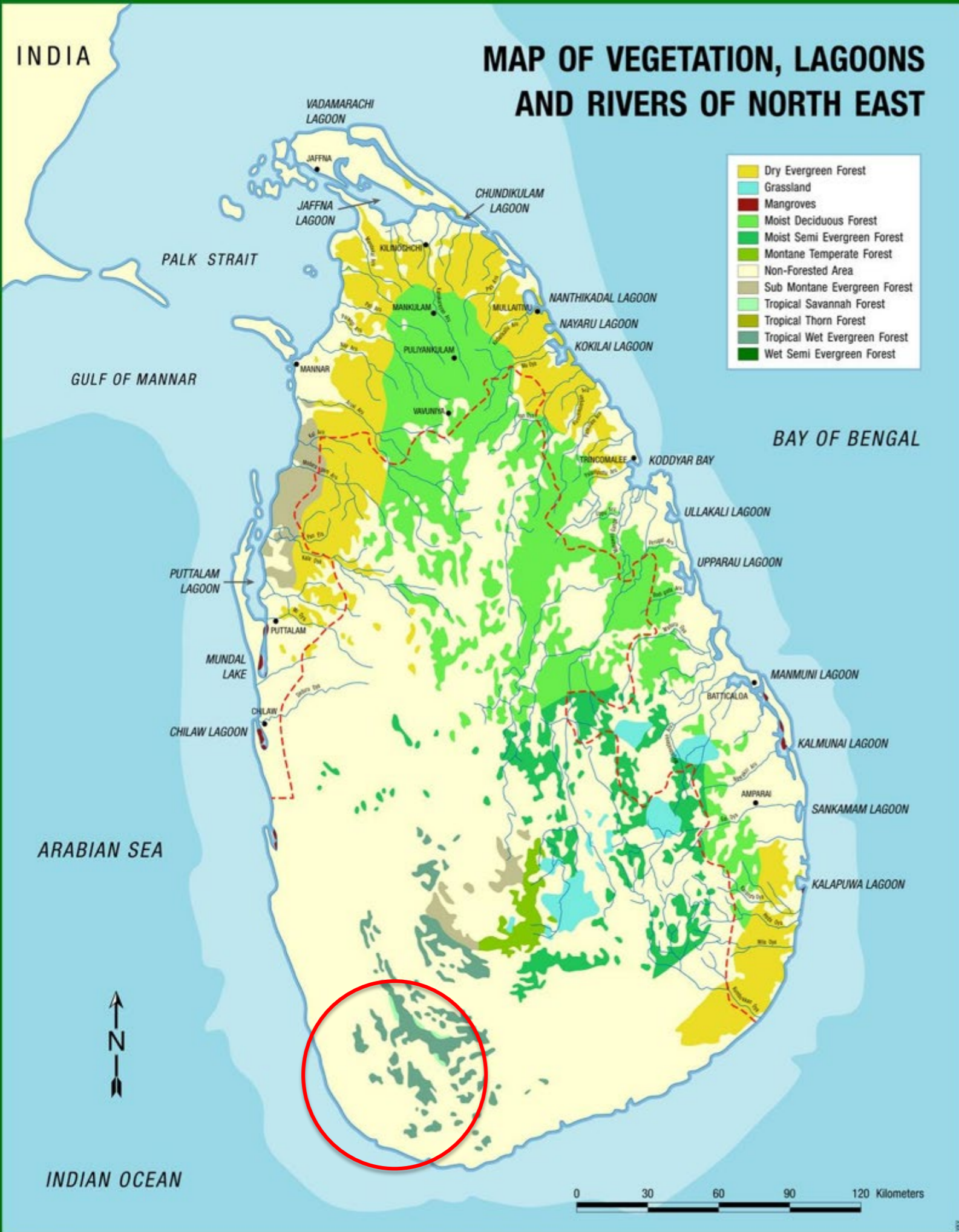
Background

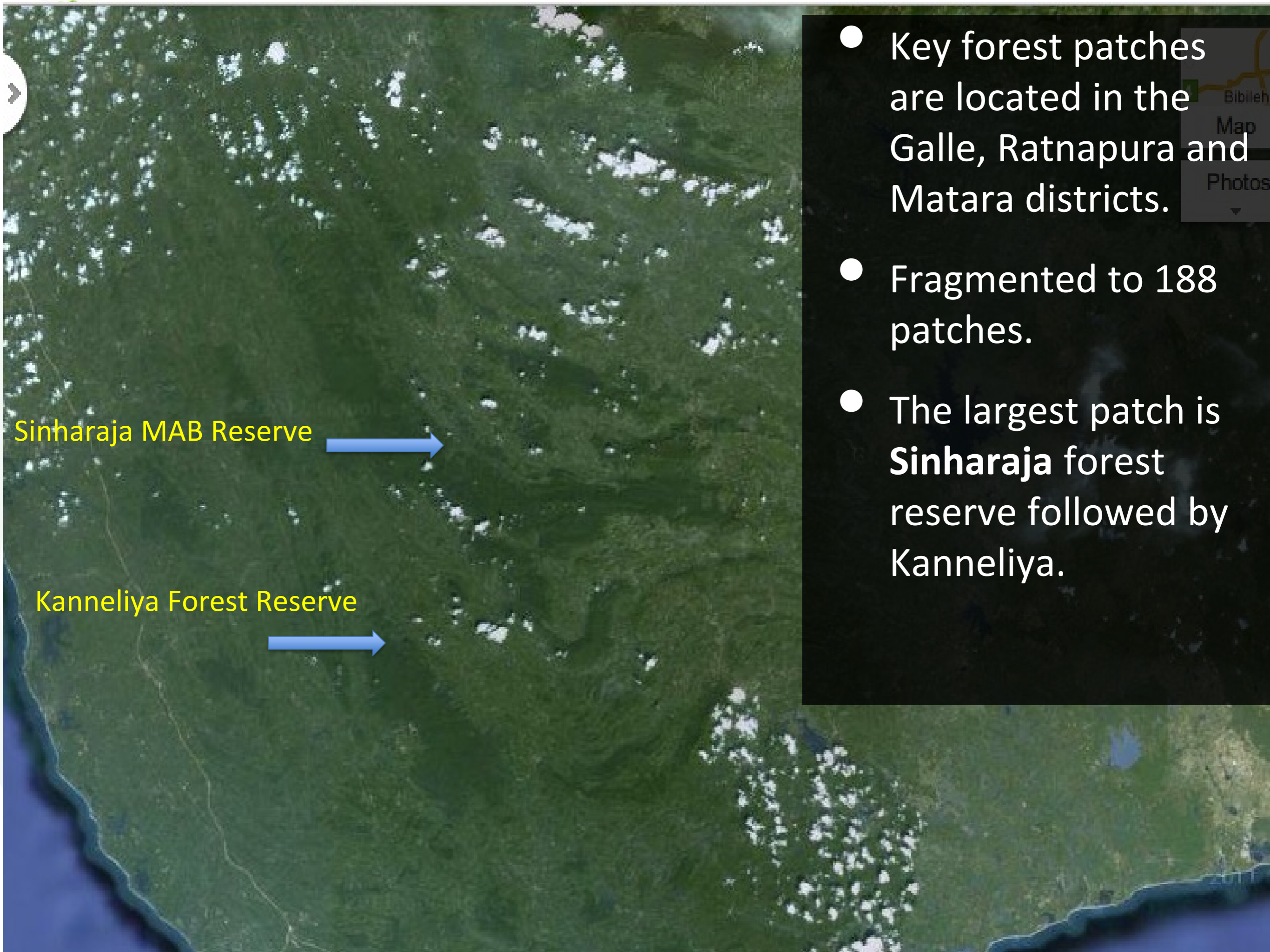


- Extent: 65,610km²
- Wet, Intermediate and Dry zones
- Population: 21 + Mn
- Per capita GDP \$4310
- 3 main Agro-ecological regions

Biodiversity hot-spots







- Key forest patches are located in the Galle, Ratnapura and Matara districts.
- Fragmented to 188 patches.
- The largest patch is **Sinharaja** forest reserve followed by Kanneliya.



Sinharaja MAB Reserve



Kanneliya Forest Reserve



Current status



- Many small holders are engaged in Tea, Rubber, Palm Oil, etc. production as a primary livelihood opportunities.
- There is an ongoing degradation of the buffer areas due to competing land use.



Objectives of the project

- Create a link between fragmented rainforest patches
- Address climate change by enhancing natural carbon sinks
- Minimise land use change and enhance livelihoods by providing a long-term sustainable alternative to traditional livelihoods
- Sustain the biodiversity and ecological resources of the lands



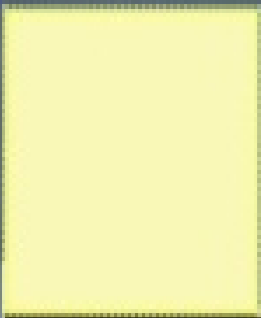
Area 2

Area 3

Area 1

Area 5

Area 4



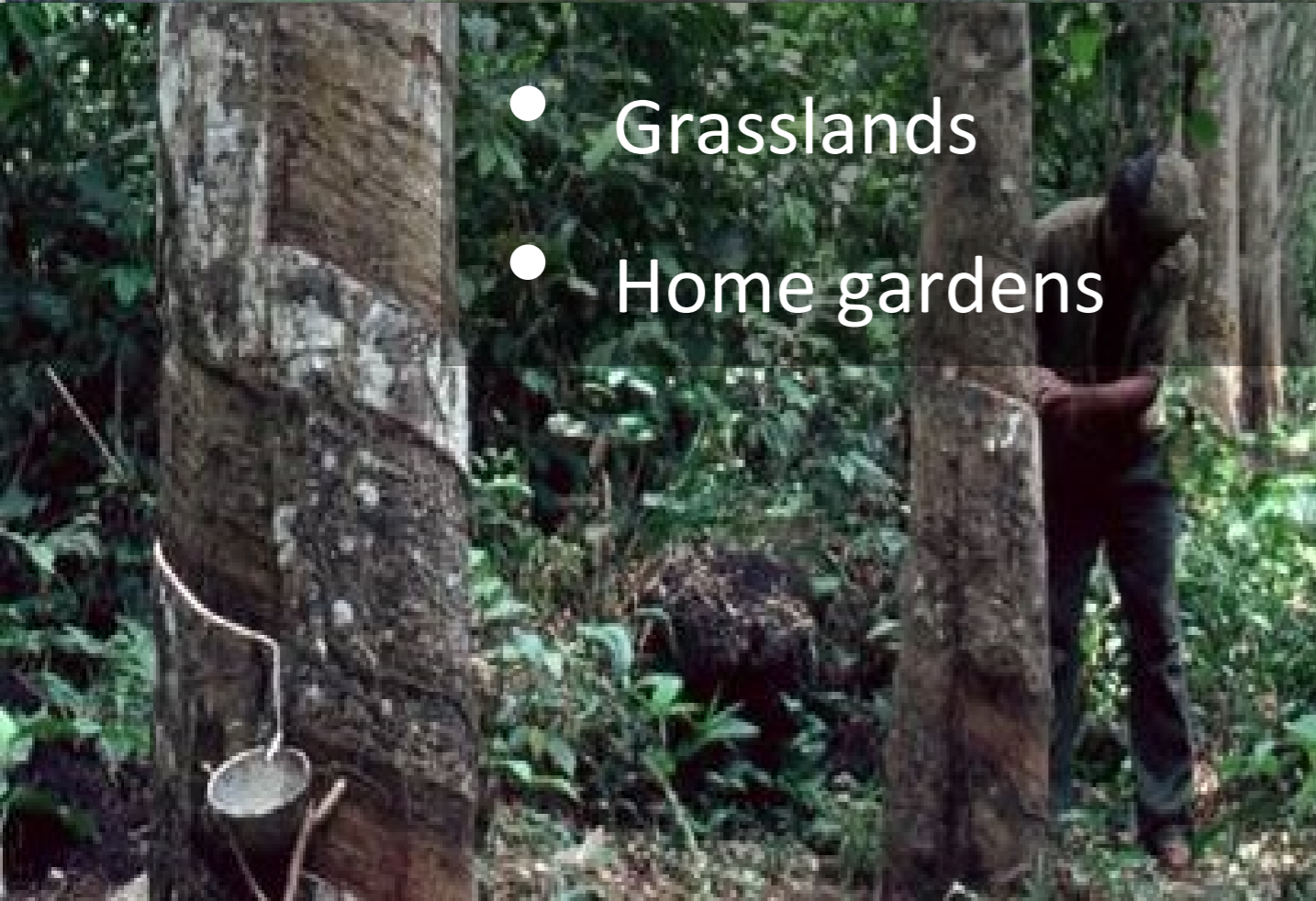
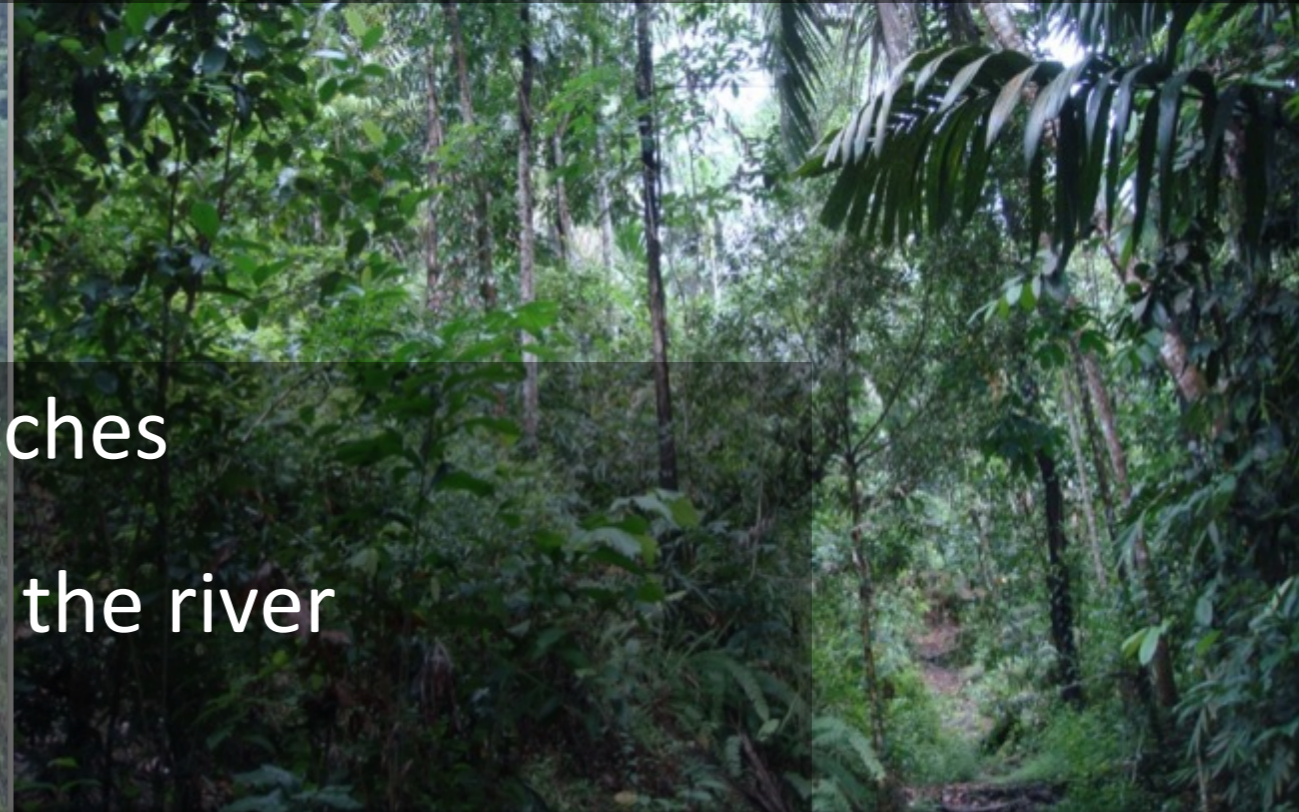
10 km

The project site



New Plants were Introduced to..


- Small deforested patches
- Forest patches along the river
- Barren lands
- Grasslands
- Home gardens





**Private, Smallholder Land
– used for Tea Cultivation**

**Protected Rainforest
Reserve
- Kanneliya**

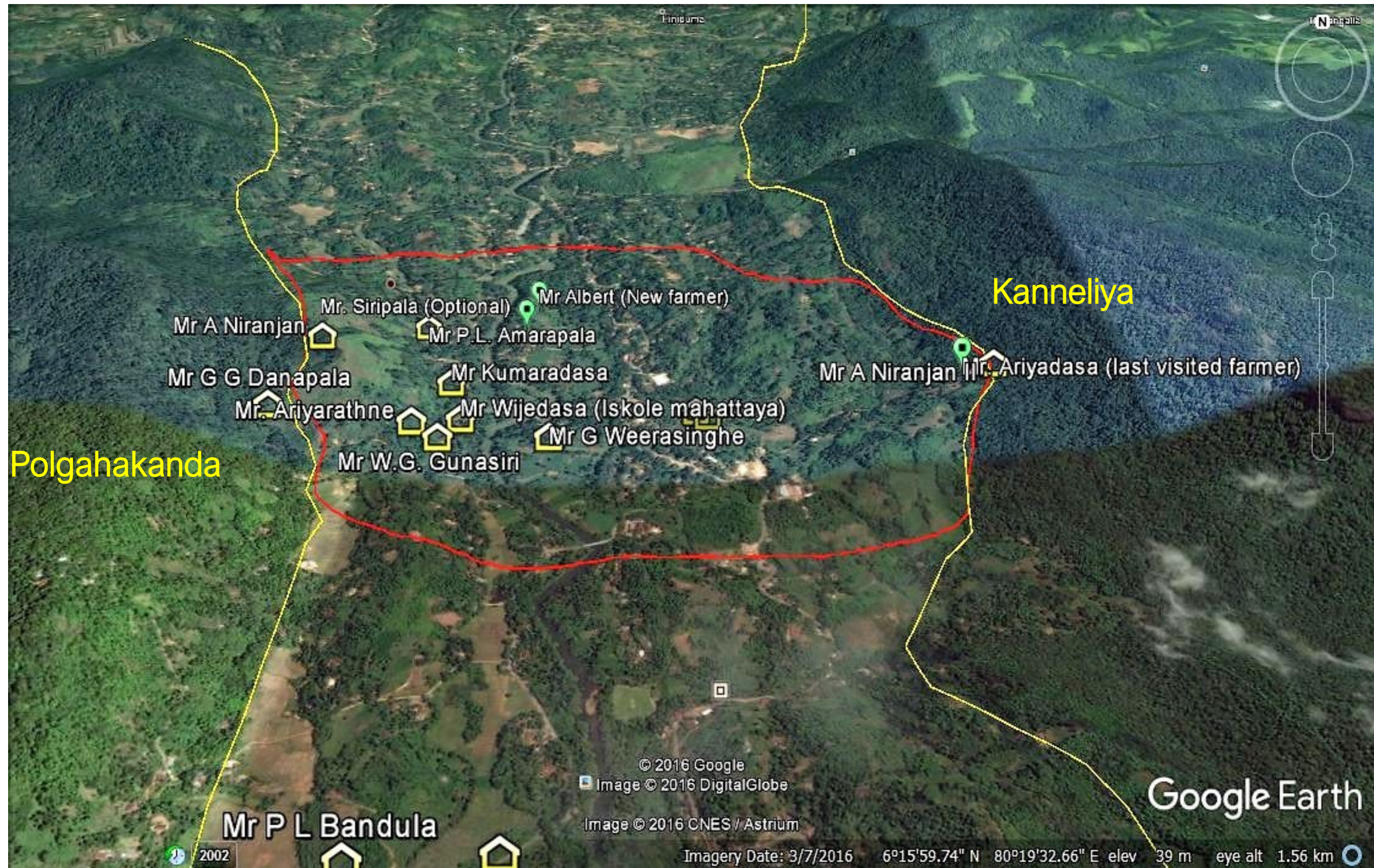
- 
- A photograph of a nursery under a black shade net. The nursery is filled with numerous potted seedlings of various species, arranged in rows. The ground is dirt, and the background shows a dense forest of trees. A semi-transparent text box is overlaid on the right side of the image, containing a bulleted list of statistics.
- More than 15000 seedlings
 - More than 90 different tree species
 - More than 45 plant families
 - Distributed amongst selected farmers covering an area of **18.88 ha** of eligible lands

Plant sorting and tagging

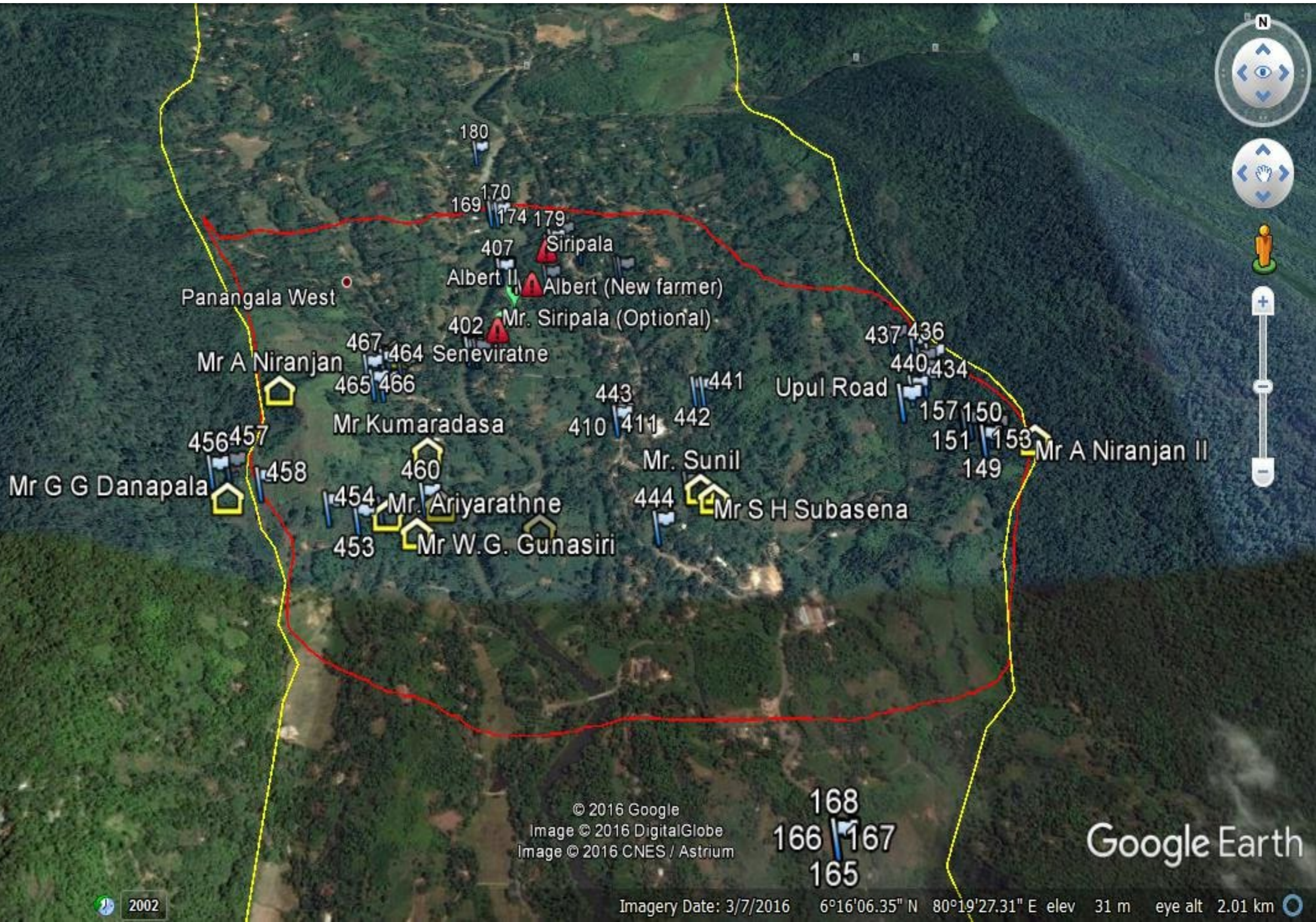




Phase I (2008-2010)



Phase I & Phase II





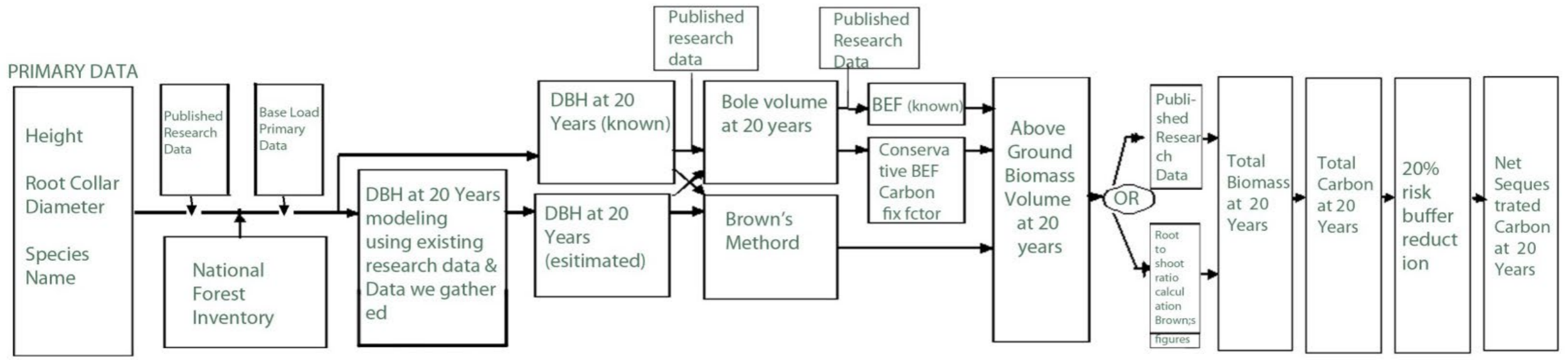
Carbon sequestration calculation

- Estimation of Base-load carbon stock
- Prediction of future carbon to get carbon credits
- Soil Carbon



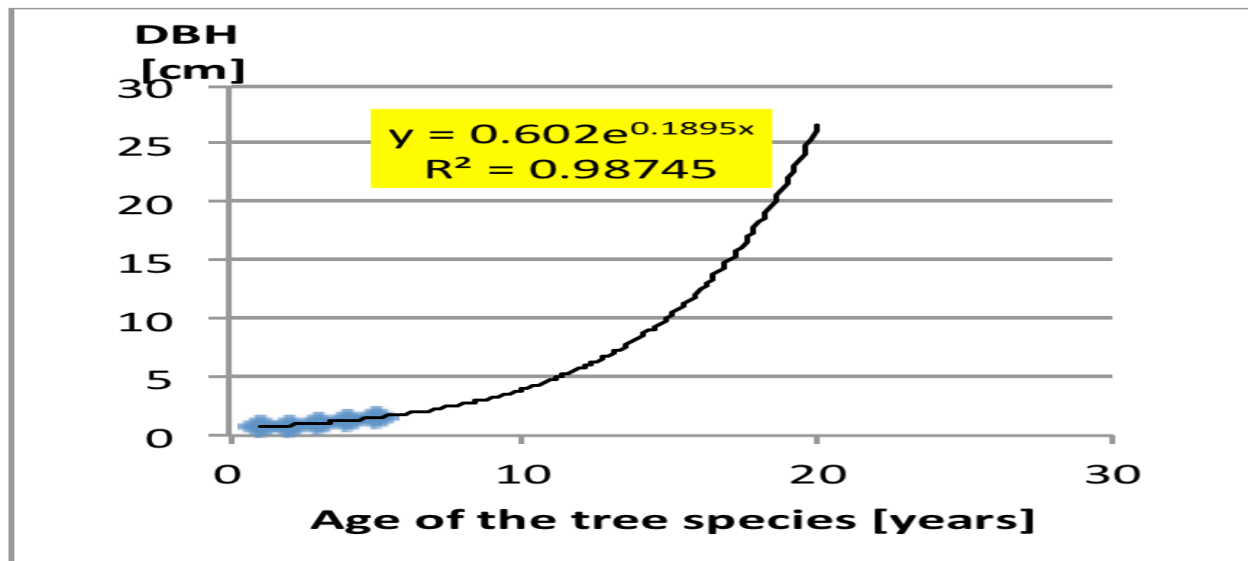


Calculation

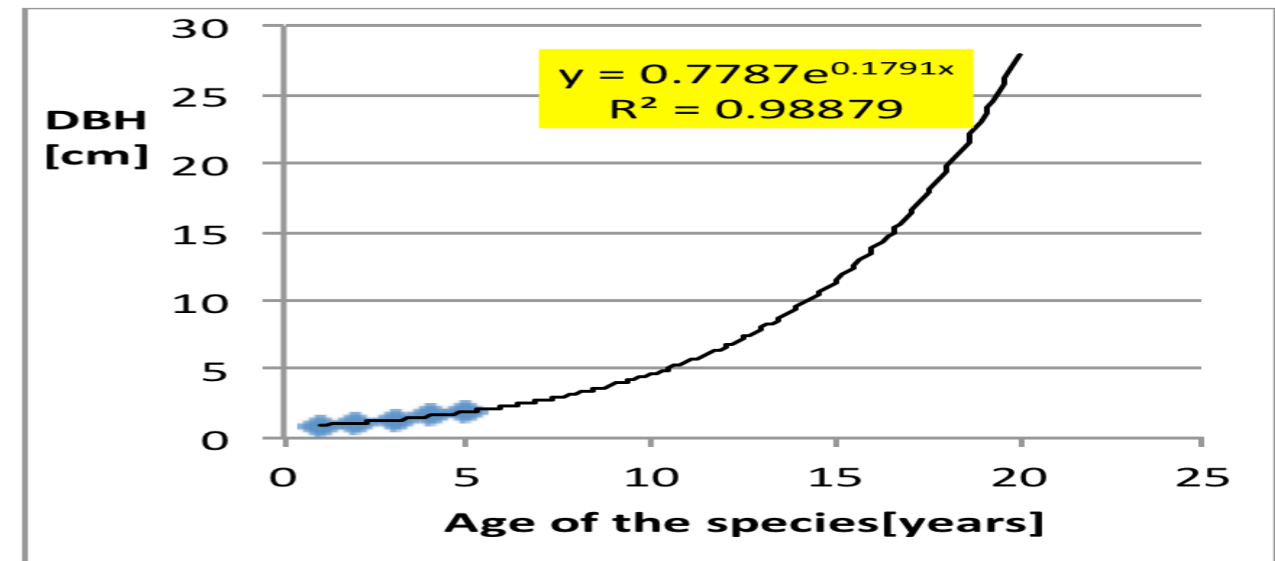


Growth Models

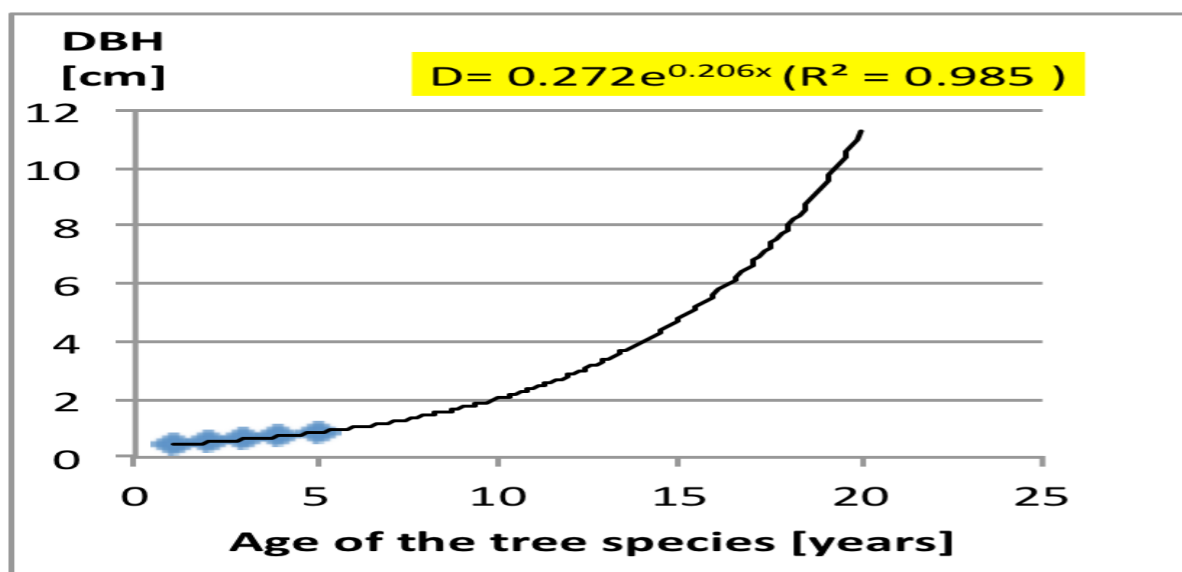
Carallia brachiata



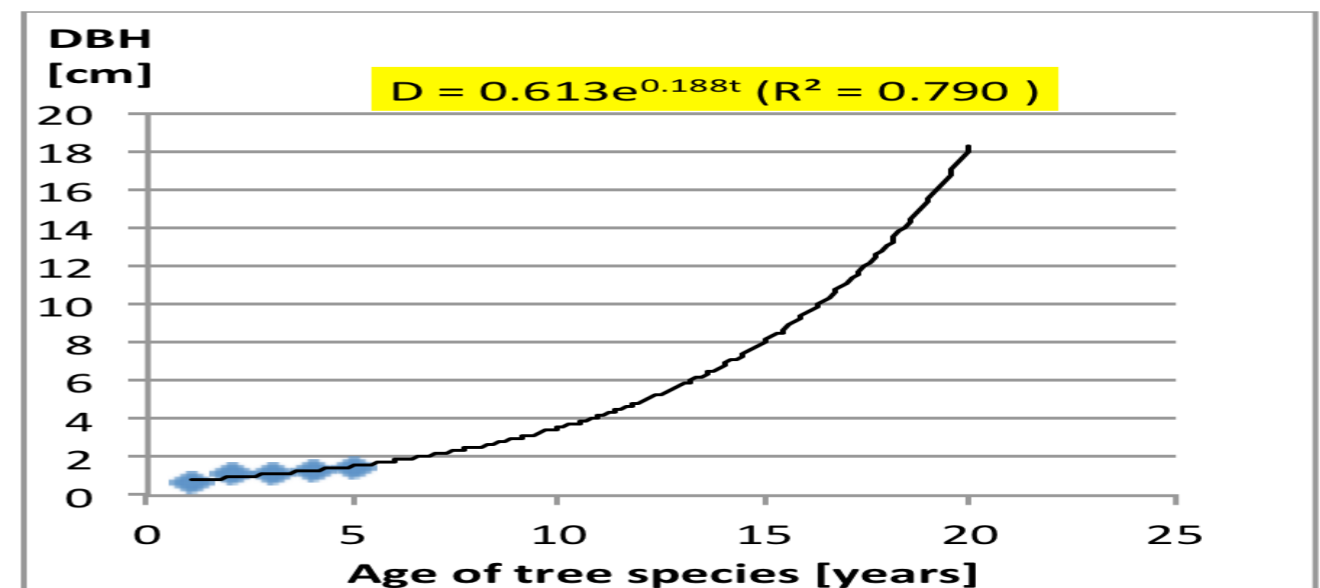
Filicium decipiens



Mangifera zeylanica



Dipterocarpus zeylanicus





Estimated creditable carbon for 15 year project period

	Total CO ₂ /tons	20%buffer CO ₂ /tons	Total tradable CO ₂ /tons	Total tradable CO ₂ /tons per ha
Carbon sequestration potential from new plants	1655	103.4	1521.4	152.14

- Continuous monitoring against set criteria
- Farmer payments

Payments for Ecosystem services –
Average farmer income was increased by 13-15%





2010

2017



Community Based Organisation

- Formed in June 2016
- The CBO will coordinate & manager;
 - Farmer Payments
 - Required Trainings
 - Endemic & Native Plant Nursery
 - Production & sale of smallholder organic products(Value added/ High branding commodities)
- Through the formation of this CBO, CCC has paved the path for the project to self-sustain in the long-term, empowering local communities further





Project Summary

- **Project Title:** Hiniduma Bio-Link Project Sri Lanka
- **Project Type:** Afforestation and Reforestation
- **Project Owners:** Conservation Carbon Company
- **Starting Period:** 2010
- **Standards Applied:** Plan Vivo Standard (Voluntary Carbon Market)
- **Other used documents:** IPCC Guidelines for AFOLU project, Carbon Fix standard (Calculations)
- **Validation:** 2011
- **Documents approved:** 2011
- **Verification:** done by independent party (Dr Edward Mitchard, School of Geosciences, Edinburgh, UK)
- **Registration:** 2012 in the Markit Environmental Registry



Project Network

[Project register](#)
[Plan Vivo impacts](#)

Hiniduma Biolink Project, Sri Lanka

Location	Galle district, SE Sri Lanka
Project coordinator	Conservation Carbon Company (with Rainforest Rescue International) Go to website
Activities	Mixed species reforestation with tea smallholders to create biodiversity corridor
Area under management	11 ha
Participants	15
Plan Vivo Status	Registered Plan Vivo project since July 2012
Verification status	Verification required before August 2017



hiniduma men with seedling.jpg

[Click here for picture gallery](#)

Hiniduma, in the southwest rainforest ecosystems. The 10km of this small village. cover, and are under extre



Financial Information Services

Registry - Public View

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Account Holders		Projects	Issuances / Listings	Holdings	Retired Credits					
△ Name	Category	Standard Name	Project Type	Status	Additional Certification	Validator	Developer	Country	Documents	
Hiniduma Biolink Project	Carbon	Plan Vivo	Afforestation / Reforestation	Active		Plan Vivo-Approved Expert Reviewer	Conservation Carbon Company (Pvt) Ltd	Sri Lanka, Galle	View	



Marks and Spencer purchased Credits from the Hiniduma Bio-link Project to launch the world's first Carbon Neutral Lingerie, which was also the first time ever the company has purchased carbon credits for offsetting purposes

Loving support

Give your figure and the environment a boost with M&S's beautiful new range of carbon-neutral lingerie

When you're shopping for luxurious lingerie, helping save the rainforest is probably the last thing on your mind. But thanks to the gorgeous new Autograph range of carbon-neutral underwear, you can now combine the two. As part of its Plan A commitment to tackling climate change, M&S has teamed up with MAS Intimates – a Sri Lankan manufacturer – to pioneer an award-winning, energy-efficient lingerie manufacturing plant in central Sri Lanka. This innovative factory produces 30 per cent fewer carbon emissions than comparable plants, and the remaining carbon footprint from the range is offset by investment in local rainforest replanting projects (see right) to make the products carbon neutral.

Inspired idea

To help with the development of the exquisite Autograph Leaves Collection, M&S and MAS Intimates worked with The Carbon Trust to map the total carbon footprint of each of the items in the range – from the manufacture of all their individual components, to sewing, transport and even machine-washing after purchase. Paschal Little, head of technology for M&S lingerie, says: 'We've learned so much from this exercise that we can apply to reducing the carbon footprint of future products in lingerie, and across all M&S products.' Richard Gillies, director of Plan A, adds: 'As part of our Plan A eco and ethical programme, every M&S product will have an environmental, social or health quality by 2020.'

Grand designs

The range's amazing eco credentials aren't its only appeal. Soozie Jenkinson, head of M&S lingerie design, explains: 'The new range is sophisticated, elegant and glamorous. We've used a combination of intricate lace and dramatic embroidery.' Every piece is designed to be comfortable as well as beautiful. Soozie adds: 'We've chosen mesh and microfibre stretch fabrics for their softness, fit and support. And the whole range is machine washable – we recommend you use an eco-wash setting to take the best care of your lingerie and the environment.'



Style picks

Every piece in the Autograph Leaves Collection is carbon neutral and helps to support the reforestation of the Sri Lankan rainforest.



Autograph Leaves Collection multiway bra, £22, and hi-leg knickers, £9.50 (T81/6166ML)



Autograph Leaves Collection push-up bra, £22, and thong, £9.50 (T81/6166E/T)



Autograph Leaves Collection suspender belt, £12 (T81/6166U)*



Autograph Leaves Collection bra, £20, and Brazilian knickers, £9.50 (T81/6166N/A)



'The range is inspired by the intricate patterns of nature and the exotic foliage of the rainforest, which it helps support'

Soozie Jenkinson, head of M&S lingerie design

LEFT Autograph Leaves Collection multiway bra and hi-leg knickers, as above
*Selected stores only

ECO FASHION



Local farmers benefit directly from the rainforest replanting schemes, as a quarter of the trees are income-generating for them and their families

COMMUNITY SPIRIT

To offset remaining carbon emissions from the production of the new lingerie range, M&S is working with the International Rainforest Trust and the Conservation Carbon Company, in Sri Lanka, to invest in local rainforest replanting projects.

- Sri Lanka's tropical rainforests harbour around 90 per cent of the country's species, but are disappearing at a rate of 1.6 per cent annually, so replanting native tree species is vital for both reducing carbon and building habitats for local wildlife.
- Rainforest has become increasingly fragmented in the country, but the establishment of 'biodiversity corridors' can allow species to move between different habitat patches, helping to prevent extinction.
- M&S's investment has seen 6,000 trees planted on the land of nine farmers, creating pathways for native creatures such as the purple-faced langur (monkey) and the Ceylon rose butterfly.
- The scheme also helps local farmers. Paschal Little explains: 'Around 25 per cent of the trees planted will generate income for farmers and their families by producing fruit and spices. In this way the farmers also have an incentive to maintain the new trees until they become established.'



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Anyone for (carbon neutral) tea?

Relaxnews
Thursday, 23 December 2010

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Sri-Lankan tea producers Eswaran Brothers are taking their environmental responsibility seriously and are claiming to be the world's first carbon neutral certified tea company.

According to the December 20 press release all aspects of the company's carbon emitting activities were considered and measured following which Eswaran Brothers then implemented measures to reduce their carbon footprint and purchased carbon offsets from a renewable energy tea plantation in Sri Lanka. The carbon neutral certification was awarded by the Carbon Neutral Company which adheres to the global greenhouse gas emissions measuring standards.

However despite these positive environmental intentions the practice of carbon offsetting has



2009 ESWARAN BROTHERS EXPORTS (PVT) LTD.



Going Beyond Carbon






**SUSTAINABLE
 DEVELOPMENT
 GOALS**



15 LIFE ON LAND



Protect, restore and Promote sustainable use of terrestrial and fresh water ecosystems



6 CLEAN WATER AND SANITATION



Watershed protection, reduce soil erosion and provide safe drinking water



4 QUALITY EDUCATION



Children educational programs and interactive workshops







13 CLIMATE ACTION



Climate change mitigation and adaptation



Devastating floods





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Conservation - Funders



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tes one percent of sales revenue to
nd wildlife. Small, grassroots, activist
change are what it likes best.

Google Cu



MAS Linea Aqua joins CCC in groundbreaking Rainforest Project

MAS Linea Aqua joined hands with sustainability partner The Carbon Consulting Company (CCC) to inaugurate the company's latest Corporate Environmental Responsibility initiative.

Commemorating World Environment Day 2013, Managing Director of the company Sarinda Unamboowe ceremoniously planted the first of over 1,000 rainforest trees that will be planted by the company to expand the Hiniduma Bio Link project in the presence of team members from both MAS Linea Aqua and The Carbon Consulting Company.

The Hiniduma Biolink Project is a reforestation project that will establish a biodiversity corridor in between the two large remnant rainforest patches, Sinharaja and Kanneliya, in Sri Lanka and is managed by The Conservation Carbon Company in partnership with Rainforest Rescue International.

This project will use the analog forestry concept to conserve buffer zones around the forest edges. The uniqueness of the project is that it addresses the three pillars of sustainability; people, planet and profit, as the rural low income farmers gain financially and have a financial incentive to protect the surrounding forests.

The CO2 sequestered through this project (the newly planted trees) will generate carbon credits that



Sarinda Unamboowe ceremoniously plants the first tree in the company of Lalith Harath from Linea Aqua and Kasihika Jayasinghe from CCC

tally conscious organisation that has been involved in landmark conservation projects since its inception. It's great to be a part of this revolutionary concept that we hope would help rejuvenate our threatened rainforest eco systems and would help set a trend that other corporations would follow. We're very excited about working with CCC towards protecting our valuable natural environment for future generations."

"Fostering the engagement of the corporate sector in mitigating the impacts of climate change is one of our prime directives," said Sanith de Silva Wijeyeratne, Chief Operating Officer of The Carbon Consulting Company.

"This project is the first of its kind in Asia to be certified by Plan Vivo and is intended for value-added carbon capture and sequestration through sustainable forestry projects. We empower and make partners of traditional communities living in close proximity to tracts of natural forest where biodiversity is high, but under threat. Community members work with us to protect and extend forest coverage while preserving biodiversity and restoring ecosystems under expert supervision. We are greatly encouraged by Linea Aqua's decision to partner us in this project, and it demonstrates the company's

citizen." Linea Aqua is a joint venture between MAS Holdings, Speedo International (UK) and Brandot International (USA) and has earned a global reputation for being a leading swimwear solutions provider.

Established in 2001, Linea Aqua's contemporary 200,000 sq. ft. manufacturing facility houses a full spectrum of services ranging from design to delivery.

Linea Aqua's CSR projects cover a variety of critical social issues from environmental conservation to improving the facilities in neighbouring rural schools and elders' homes. In 2011, Linea Aqua was given the 'Best Corporate Citizen Award in the Special Projects Category' by the Ceylon Chamber of Commerce for its restoration work that is currently underway at the Bundala National Park.

The Carbon Consulting Company has been created with the purpose of helping organizations reduce their environmental impact and maximise the CSR and marketing opportunities arising from these efforts.

The CCC's mission is to help corporate leaders and decision makers develop the skill sets and knowledge base that would be required for survival in the dawning era of a low carbon economy. The CCC is

CCC launches Geo-tagging system for Miss Earth finalist

Continuing to push the boundaries in reforestation, The Carbon Consulting Company (CCC) recently partnered with Miss Sri Lanka for Miss Earth contestant finalist Monali Dissanayake to conduct an awareness and engagement workshop for children on environment and bio-diversity conservation. Getting the children to visit the site of the unique Hiniduma Bio Link project. The CCC team members were able to engage the children in the project with lectures and discussions, culminating with each of them planting several trees on location.

Further extending the ongoing interaction for each child, The CCC launched a unique Geo-tagging system that accurately tracks the position of each plant through its Geographical co-ordinates and places them accurately on an online map of the area. Photos of the plant and its details can also be accurately uploaded. "Our focus has always been to create better engagement solutions for our stakeholders," says The CCC Chief Operating Officer Sanith de S. Wijeyeratne. "This advanced mapping system is administered by team members specially trained in Geographical Information Systems, who use the latest technology to provide



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

a far more accurate picture of the gradual expansion of the Hiniduma Bio Link project to our partners and stakeholders. With more corporates and individuals volunteering to join this groundbreaking project, we wanted to up the ante by ensuring that we provide as graphically detailed information as current technology would permit."

The 'Hiniduma Biolink Project' is an effort to establish a biodiversity corridor between the two large remnant disturbed rainforest patches - Sinharaja and Kanneliya in Sri Lanka and to conserve buffer zones around the forest edges using the 'Analog Forestry'

concept.

Expanding on the launch, Project Manager of the Hiniduma Bio Link Project Lakmini Senadheera said, "We are happy to partner with Monali Dissanayake, one of the Miss Sri Lanka for Miss Earth Pageant contestants and we hope that this venture will create greater awareness of the need to become more environmentally conscious in our day-to-day lives. We, at The Carbon Consulting Company are working towards building a better future for our children and we hope that by supporting such individuals as Dissanayake we can expand our sphere of influence."



Expolanka joins Hiniduma tree planting initiative

Continuing its efforts in uplifting biodiversity in Sri Lanka, leading conglomerate Expolanka Holdings PLC joined the Hiniduma tree planting initiative with Carbon Consulting Company (CCC) and Rainforest Rescue International (RRI) to help preserve the rainforests of the country.

The initiative announced on World Environment Day will look at setting up a biodiversity corridor between the two large remnant disturbed rainforest patches - Sinharaja and Kanneliya and to conserve buffer zones around the forest edges using the 'Analog Forestry' concept.

As the area surrounding the rainforests is located in the Hiniduma area, the project is titled 'Hiniduma Bio Link Corridor'.

Expolanka's Head of Marketing, Corporate Communications and CSR Paddy Weerasekera said, "Being in the forefront of biodiversity projects such as this, Expolanka looks at improving not only the environment but the connecting sources such as communities around the area. As a secondary objective, the project aspires to augment the livelihoods of traditional communities living in close proximity to tracts of natural forest where biodiversity is high, but



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 Sajjeth Ilyas

approached farmers in work within this unique the forest-edge community project."

ject adopts a 'Payments for Ecosystem Services' model where participating farmers will receive staged payments in return for looking after the trees. Participants are paid a monthly amount for every tree that they continue to preserve for the duration of the project which is 20 years.

"The word sustainability is no longer just a 'buzzword' in corporate parlance," says COO of Carbon Consulting Company Sanith de S. Wijeyeratne. "Worldwide, an increasing number of global companies are taking cognizance of the dire need to integrate sustain-

are greatly encouraged by Expolanka's support of this unique biodiversity project and we believe it paves the way for other local corporate entities to take a similar step up to the plate."

"Expolanka Holdings PLC aspires to be a leader in developing long-term sustainability in the communities it operates. The CSR practices is intertwined to the operation of the business and gets delivering social, economic and environmental benefits to employees, communities and other stakeholders. Over the years, the company has initiated several long-term and short-term CSR in



Adding value to the project

- Environmental services
 - Biodiversity offsets (BBOP)
 - Watershed protection and water neutral
 - Climate, Community and Biodiversity Standards (CCB Standards)-Valuing social
- Potential for REDD+ credits



Develop innovative self sustain financing mechanisms to biodiversity conservation and climate change mitigation...

Thank you

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