



**Foundation EcoFormation**  
Reforestation & agroforestry  
Restoration of biodiversity



MADAGASCAR 7' 200 HECTARES

PERU 25' 000 HECTARES



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## ABOUT US



EcoFormation Foundation is a not-for-profit organization recognized as tax exempt charity and registered under Swiss law. Working closely with the local populations concerned, it sets up and manages sustainable development projects.

Founded jointly in 2009 by Prof Dr Balz Gfeller, a Forestry Engineer, and Philippe Dubois, an Agricultural Engineer, the foundation is specialized in reforestation, agroforestry and biodiversity restoration.

It is supported by the Swiss Confederation with assistance from the Swiss Federal Institute of Technology (ETH) and the University of Applied Sciences.

[WWW.ECOFORMATION.ORG](http://WWW.ECOFORMATION.ORG)

# EXECUTIVE SUMMARY

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ECOFORMATION HAS CREATED A UNIQUE BUSINESS MODEL FOR SUSTAINABLE DEVELOPMENT, FOCUSING ON THREE MAIN AXIS:



**ENVIRONMENT:** Re-establish primeval forest and restore biodiversity



**SOCIAL:** Train local people, ensure food security and facilitate access to medical care.



**ECONOMIC:** Create job opportunities, extend trade channels and stimulate local economic growth

THE ACTION PLAN WAS DEVELOPPED BY WORLD-RENOWNED EXPERTS IN THE FIELD OF FORESTRY ENGINEERING. A FIRST PROJECT WAS LAUNCHED IN MADAGASCAR, ON A SURFACE OF 7'200 HECTARES.

## ECOFORMATION

- is looking for donations in order to implement and develop the projects.
- provides a mid-term solution for generating revenues from commodities and carbon certificates.
- seeks sustainable partnerships to replicate the action plan in other sites (countries).

# FINDINGS ET PRINCIPLES

## FINDINGS

### DEFORESTATION HAPPENS WORLDWIDE AND CAUSES:

- Biodiversity impoverishment and eradication of some endemic species;
- Soil erosion, landslides and floods;
- Micro-climate changes, ecosystems imbalances;
- Food security issues and a difficult access to drinking water which often causes diseases;
- A loss of income for the local population that increases social instability and vulnerability;
- A rising amount of greenhouse gas, as forests naturally remove and sequester CO<sub>2</sub>.



## PRINCIPLES

### ECOFORMATION APPLIES THE FOLLOWING:

- Train the local population and build awareness before taking action.
- Create legal entities, transferring land tenure and product rights to stakeholders in order to slow down the destruction of woodlands.
- Adopt agroforestry as one of the solutions for developing food crops and ensuring food security.
- Develop forestry engineering and agricultural distribution to support the financial independence of the population.
- Involve native people in the project so they safeguard it if they recognize it as a source of food, job and revenue.

IN 1952, THE FOREST AREA WAS COVERING 87% OF THE ISLAND OF MADAGASCAR. TODAY THE WOODLAND IS ONLY OF 8%\*.

\*2011 Impact survey from the UNFCCC on Madagascar



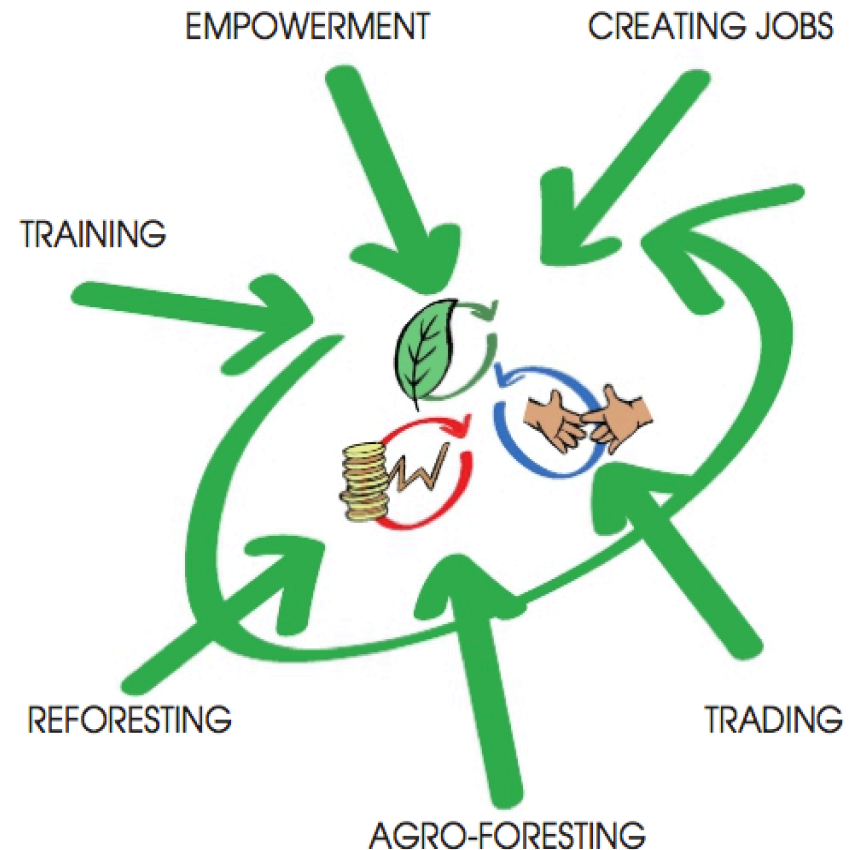
# CONCEPT

## ECOFORMATION BUSINESS MODEL APPLIES CLEAR AND MEASURABLE OBJECTIVES:

- Reforest and re-establish biodiversity as well as regulate microclimate;
- Apply forestry management methodology to generate short/medium/long-term incomes;
- Integrate agroforestry concepts to ensure the food security of indigenous people;
- Stimulate and develop forestry and agricultural channels to generate income and to provide financial independence for local populations;
- Create employment opportunities for both women and men to promote regional socioeconomic stability and provide access to education and medical care.



## ECOFORMATION HAS CREATED A UNIQUE 6-PHASE BUSINESS MODEL FOR SUSTAINABLE DEVELOPMENT:





## → EMPOWERMENT

**INVOLVE AND EMPOWER THE LOCAL POPULATION SO THEY FULLY SUPPORT THE PROJECT**

- Mobilize local populations to ensure the success of the project over the long run.
- Create legal entities (associations or cooperatives), transfer land tenure and products rights to the members of the organization in order to limitate socioeconomic exposure to risk.
- Achieve the independance and development of the entities by training, coaching and structuring the management team.
- Implement financial management rules and policies, including monthly reporting.

# CONCEPT

## → TRAINING

Train the local population to sustainable forestry and agroforestry techniques (100pct organic products).  
Create an educational platform to facilitate exchanges for international students.

### CREATE A TRAINING CENTER FOR SUSTAINABLE FORESTRY TECHNIQUES

- Increase the awareness of local populations on the serious environmental impacts of deforestation through dangerous clear-cutting and slash-and-burn practices.
- Supply the center with the necessary equipment for nursery gardening, forestry and agroforestry.
- Hire a team of instructors consisting of temporary volunteers and permanent paid employees.
- Integrate local students who are finishing their schooling and offer them a recognized training sanctioned with a national diploma.
- Ensure the preservation of endemic species (the program also aims at ensuring the preservation of endangered species).

### CREATE AN EDUCATIONAL PLATFORM FOR INTERNATIONAL STUDENTS

- The project sites also serve as educational platforms for international students with forestry, agricultural engineering, development or management background.



**ETH**

Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

haute école  
neuchâtel berne jura  
**arc**  
gestion  
neuchâtel delémont



Haute école spécialisée bernoise





## REFORESTING / AGROFORESTING

Reforest depleted primeval forestland with endemic species of slow-growth (precious woods) and fast-growth (timber) trees.

### REFORESTING PRIMEVAL FORESTLAND

- Develop sustainable management plans and conduct environmental impact studies.
- Replant decimated species, giving priority to the endangered endemic species. As an example, in Madagascar we have reforested with Acacia, Teak, Rosewood, Khaya and Ebony).
- Apply zoning and forestry management plans in order to preserve and favor the plantations.
- Manage the supply of wood earmarked for cottage industries (construction) and for cabinet making according to the specific growth of each species.
- Gradually reintroduce endemic animals, insects and reptiles by creating forest corridors from residual forests.



### DEVELOPING AGROFORESTRY

- Agroforestry has an important added value as compared to conventional environmental projects. It provides rapid food security, while guaranteeing profitability due to multiple-sourced revenues.
- Products are farmed following organic methodology.
- EcoFormation uses processes that ensure full traceability of products.



# CONCEPT

## → MARKETING

Market forestry and agricultural products, as well as carbon credit certificates in order to ensure the financial independence of local populations.

### ENSURE THE ECONOMIC INDEPENDANCE OF THE LOCAL POPULATIONS

- Sell agroforestry premium products, create long-term harvesting techniques and market timber.
- Grow foodcrops (fruits, vegetables and cereals) for local consumption.

### OFFSET THE CO<sub>2</sub> EMISSIONS FROM INDUSTRIALIZED NATIONS

- Because they capture carbon dioxide (CO<sub>2</sub>) from the air, store the carbon et release the oxygene (O<sub>2</sub>), forests play a central role in climate change mitigation as they have the capacity to sequestrate roughly 12 tons of CO<sub>2</sub> per hectare and per year.
- The revenue received through carbon offset is given entirely to the local entity until the project becomes profitable. 30% of it is redistributed to the local populations until it reaches the defined threshold.
- The balance is invested in further development of the site and in similar projects.

### MAKE TEAMS ACCOUNTABLE

- Organization members are in charge of the marketing of forestry and agroforestry products locally.
- EcoFormation partners are in charge of the trading of commodities and carbon offset certificates on a broader scale..



## → CREATING JOBS

Create jobs, particularly for women (minimum 60% of positions available) nurseries gardening and reforestation create 50 permanent jobs per 1'000 reforested hectares.

### CREATE PERMANENT JOBS

- Main areas include reforestation, site maintenance, forest protection and centre operation (50 permanent jobs/1'000 hectares reforested).

### PRODUCE SEEDLINGS

- Encourage the farmers' spouses to set up plant nurseries which are subcontracted to grow plant which they then sell to EcoFormation.

### OFFER SEASONAL JOBS

- Provide extra employment during the high-activity reforestation period (rainy season) when the men are available for this kind of work.

### CREATE BABY-SITTING AND CANTEEN SERVICES

- Set up infrastructure to support women employment and pay school fees for children.





# APPROACH AND ADVANTAGES



## ECOFORMATION ADVANTAGES

- Implication of both local and european forestry engineers in the development of the projects.
- Strong experience of the founders in the conduct of such projects in developping countries.
- Holistic vision accurately integrating economic, social and environmental parameters.
- Capacity to implicate and empower local populations.
- Experience in risk management for commodities: fixed criteria of quality for export.

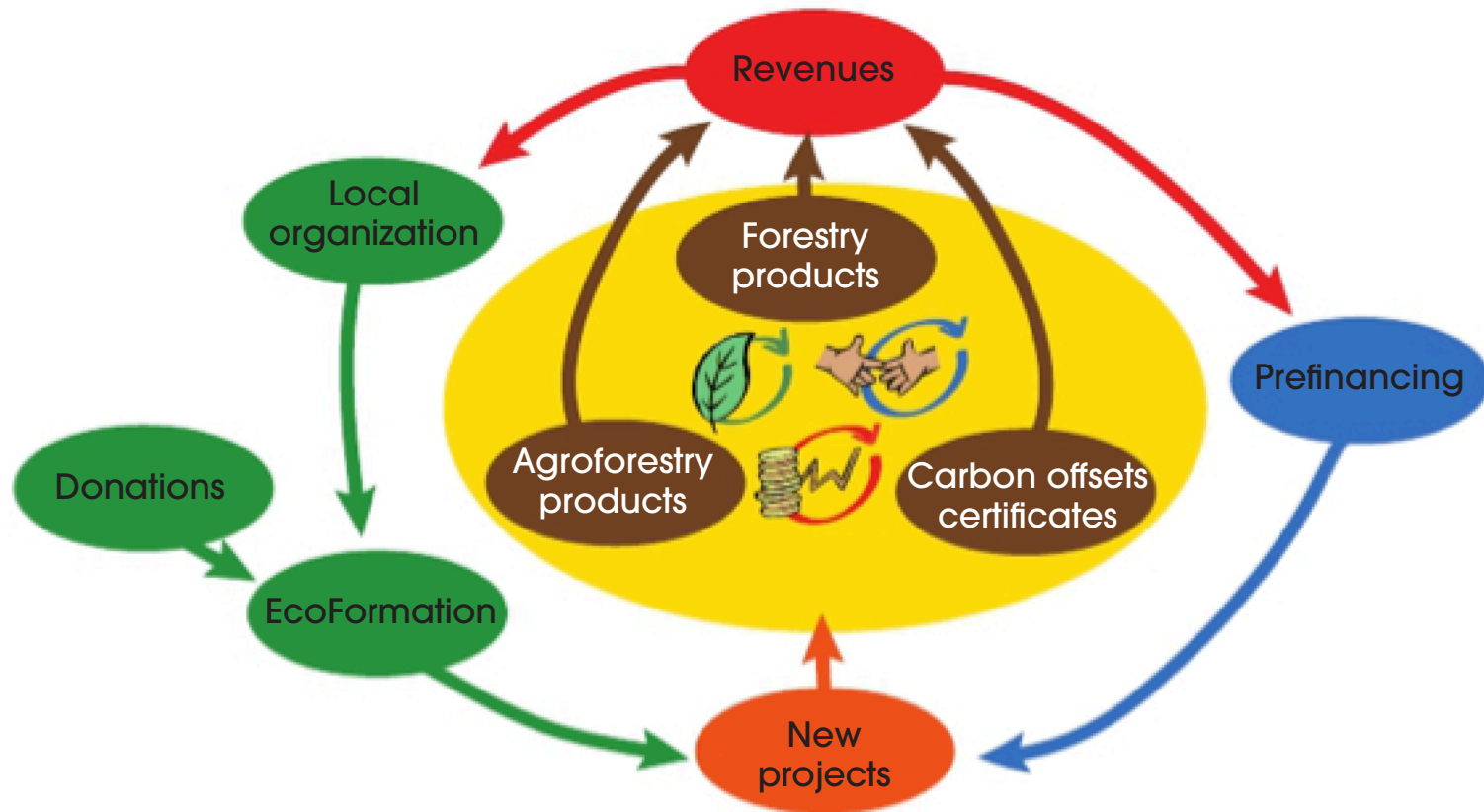
## ECOFORMATION APPROACH

- Enhance and revitalize natural resources to generate income.
- Stabilize the ecosystem by combining agroforestry with reforestation, crop culture and marketable products.
- Increase social stability through job creation (50 jobs per 1'000 hectares of reforested land).
- Improve living conditions by providing education and access to medical care.



# APPROACH AND ADVANTAGES

## VIRTUOUS CIRCLE

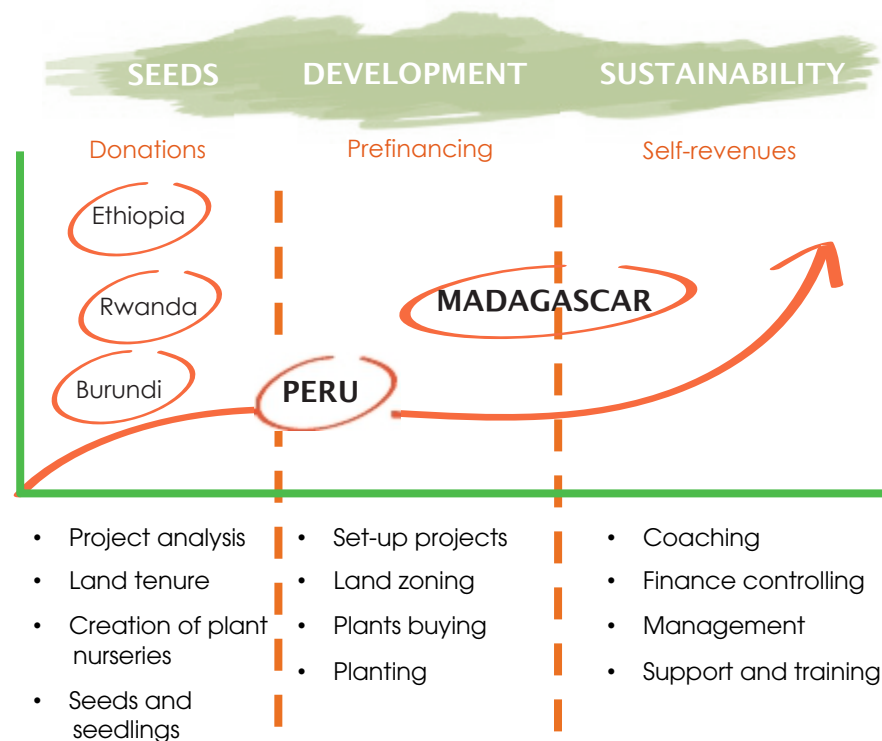


# FINANCING STRATEGIES

PROJECTS IN PILOT PHASE ARE INITIALLY FUNDED BY DONORS. THEY ARE THEN DEVELOPED THANKS TO PREFINANCING.

The projects' viability and sustainability are ensured on the basis of commodity pre-financing structures that are gradually reimbursed as from the fifth year of operation through the sale of:

- Agroforestry products (certified as organic, e.g. Ecocert).
- Carbon credits certificates (validated by a verification body, e.g. TÜV SÜD).
- Forest products, according to the forest management plans.



## PROJECTS ARE PREFINANCED BECAUSE

- Funds are not always easy to raise.
- Prefinance is a common practice in commodities.
- Prefinance ensures the sustainability of the concept and the allocation of revenues to other projects.



# CURRENT PROJECTS

## ECOFORMATION HAS DEFINED SPECIFIC INDICATORS FOR SELECTING PROJECTS



- Massive deforestation has had a negative impact on the balance of the ecosystem; in an area where natural resources and biodiversity can be rehabilitated and the microclimate mitigated.



- The poverty level of the local population is critical; in an area where our action can have a direct socio-economic impact and create direct access to education and medical care.



- The level of unemployment is high and the professional training lacking; in an area where our education program could facilitate change and where investing in forestry and agro forestry provides a source of sustainable revenue.

## NEEDS INITIALLY ORIGINATE FROM THE HOST COUNTRY'S AUTHORITIES

- Before launching a project EcoFormation carries out a feasibility study for a period of 6 to 8 months. We involve communities and local authorities which facilitates acceptance and the willingness of the people to take ownership of the project.
- An environmental impact study is then carried out by local specialists to ascertain whether reforestation and biodiversity restoration have any positive and/or negative impact on the environment.

# MADAGASCAR

## FINDINGS THAT MOTIVATED THIS PROJECT



- Forest cover is absent; aerial views of 1952 showed a forest cover of 87%. The main species of endemic birds and reptiles have disappeared (11 endemic tree species, 23 species of birds and 17 species of reptiles).



- The population of the Mampikony district is 21,500. It covers an area of 51'000 km<sup>2</sup> (larger than Switzerland's 42'000 km<sup>2</sup>). The district is made up of families who have an average of 8 children with an income poverty of USD 0.70 per capita. Only 35% of the children are enrolled in school with one fifth of the population having access to medical care.



- Main economic activities are the cultivation of rice and to a lesser extent the breeding of zebu. 75% of the population is under the age of 25 and the unemployment rate close to 67%. In the past, the trading of precious woods and other forestry activities represented a particularly significant source of revenue.



## DEPUIS 2010

### REFORESTATION – 5-YEAR DEVELOPMENT PLAN

- 6'000 hectares of primeval forest
- 1'500'000 seedlings/year to be produced for about 800 hectares/year to reforest
- 1'400 plants per hectare

### AGROFORESTRY – 5-YEAR DEVELOPMENT PLAN

- 1'200 hectares for the production of fruits and vegetables
- 240 hectares/year to be developed of which: 50 hectares of fruit trees, 120 of manioc and 70 of mixed vegetables

### BIODIVERSITY – 10-YEAR DEVELOPMENT PLAN

- 5 endemic forest species have been replanted (Cf. p. 9)
- 3 species of reptiles and 7 species of birds should be reintroduced every year by creating forest corridors.

### TRAINING CENTER

- In year 2014, 45 apprentices were enrolled in training programs (respectively 27 in 2011, 35 in 2012 and 28 in 2013)

### JOBS

- In 2014, EcoFormation provided a job to 250 people





# ENDNOTE

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## HELP US TO GRADUALLY REGENERATE THE LUNGS OF THE EARTH !

With EcoFormation participate, invest and create your environmental action by using our know-how.

### 1. ENHANCE YOUR CORPORATE IMAGE

- Fund hectares of reforestation by purchasing trees at CHF 1.- each (CHF 1'600.-/ha.)

### 2. OFFSET YOUR CO<sub>2</sub> EMISSIONS

- Purchase pre-sale carbon credit certificates directly, without the intervention of a third-part (CHF 10.-/tCO<sub>2</sub>).

### 3. INVEST IN FOREST AND AGROFORESTRY

- Fund one of our projects with a return on investment over time (interest 6% per year).

### 4. CUSTOMISED YOUR ENVIRONMENTAL POLICY

- Based on the EcoFormation concept, you can customize your own project on another site.



Recognized as of public utility, EcoFormation is tax exempt. Your donations are therefore fiscally deductible.

The uniqueness of the EcoFormation concept is carried out by internationally renowned experts. The unique concept is replicable in any country. Each partnership proposal is unique.

# ANNEXES

APPENDIX 1.

MAIN BIOGRAPHIES

APPENDIX 2.

THE CARBON CERTIFICATION

APPENDIX 3.

TRAINING PROGRAM – MADAGASCAR EXAMPLE

APPENDIX 4.

OPERATIONAL AND FINANCIAL CONTROLLING

APPENDIX 5.

OUR PARTNERS



# APPENDIX I : MAIN BIOGRAPHIES



Philippe Dubois, MSc in Agriculture, MBA, is an entrepreneur with extensive experience in business organisation and management, and the establishment of effective teams within companies such as Nespresso and Eden Spring. Philippe has led various development and training projects in Africa, Asia and Europe with coffee, cacao, water and agro forestry industries. He is an expert to the United Nations (International Trade Centre and International Labour Organisation). Philippe has been leading the definition of each project and supervising the local execution. He is the President and co-founder of the Foundation Council.



Prof. Dr. Balz Gfeller, EPFZ Forest Engineer, is a scientist and leader in the research and development of forestry, agro forestry and biodiversity projects. Balz initiated many projects in Africa, Latin America and Asia, where he implemented professional training programs for foresters and carpenters. He is a professor at the Specialised High School in Bern, the Federal Institutes of Technology in Zurich and Lausanne and the University of Antananarivo in Madagascar. Balz is the Foundation's president of honor.



Marie Nomena Allimant, MSc in Finance and Management Controlling. After her studies in Paris and various contracts with accountancy firms, Marie has been an internal auditor for the World Bank in Madagascar. After that, Marie conceptualized and developed agricultural (in wine production), environmental and social reforestation projects in Madagascar. Head of Company and Management Controller, Marie is in charge of the audit and the operations in Madagascar. She is a member of the EcoFormation Foundation Council.



Christophe Darbord, MBA, is an entrepreneur in the commodity fund and private-equity industry with a deep experience in physical and derivatives trading, risk management and asset acquisitions, obtained within companies such as Pricewaterhouse, Cargill and Bunge. He has been exposed to all commodities types, with a particular focus on the Energy spectrum (Petroleum, Coal, Electricity, Gas, CO2, Biofuels). As a business leader, he has been active in many countries across the different continents. Christophe is a member of the Foundation Council.



Oliver Gardi, MSc Environment ETHZ, is a specialist on environmental services linked with forestry engineering and other sustainable land-uses, particularly the storage of carbon in terrestrial ecosystems. Olivier currently holds a position as thematic advisor for Helvetas Swiss Intercooperation, where he advises various clients for development programs in Africa, Asia and Latin America. Oliver worked repeatedly in Madagascar on projects to reduce deforestation and to strengthen national capacities for monitoring forest carbon stocks. Oliver is in charge of EcoFormation projects quality and of registering with international carbon markets. He is a member of the Foundation Council.



Leo Gilliard, MA in International Relations and European Studies, is a young scholar familiar with the working of the international regimes of climate and environmental preservation. Particularly proficient in questions of environmental governance and human rights he joined EcoFormation after experiences at the UN-Human Rights Council in Geneva and at the Swiss Embassy in Chile. Leo is in charge of the communication and the fundraising.



Ariane Bouillet holds a MA in Law. She taught at La Sorbonne in Paris (courses in Business law, company law and special contracts) and was appointed to the Conseils Généraux de France. After several study trips to the Americas and to Asia, Ariane came to Switzerland to undertake a new MA in Political Science in Lausanne. She takes care of the Corporate Legal Affairs at EcoFormation, working on legal concerns and on contracts between the Foundation and its partners.



## APPENDIX II: THE CARBON CERTIFICATION

### THE CARBON DIOXYDE EQUIVALENT (CO<sub>2E</sub>)

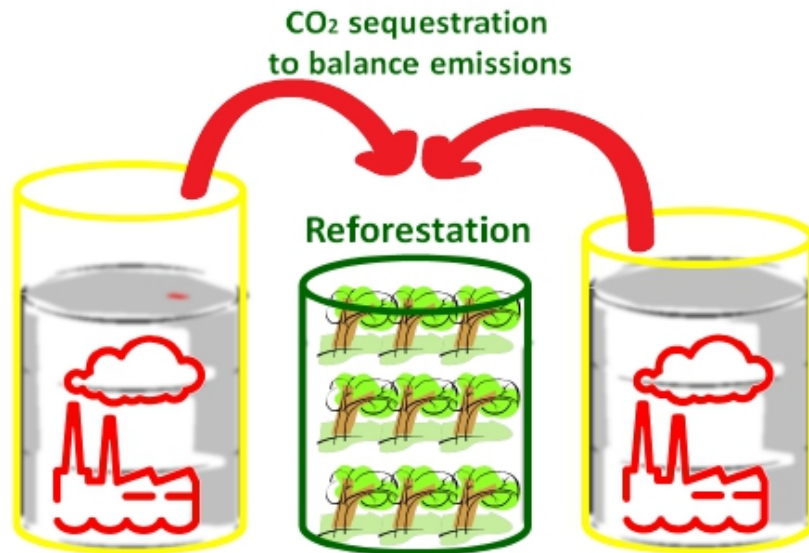
Is the universal measuring unit for evaluating the impact on global warming. There are seven greenhouse gas (GHG) with different Global Warming Potential. (GWP)

The three main GHG associated with forest are:

- Carbon dioxide (CO<sub>2</sub>) has an atmospheric lifetime of 200 to 450 years and its GWP is 1;
- Methane (CH<sub>4</sub>) has a lifetime of 9 to 15 years and its GWP is 22 (i.e. it has a warming potential 22 times higher than that of CO<sub>2</sub>);
- Nitrous oxide (N<sub>2</sub>O) has a lifetime of 120 years and its GWP is 310.

### THE CARBON CREDIT CERTIFICATION FOLLOWS A FIVE-STEP PROCESS:

1. Conduct a feasibility study for the selected site, choose a methodology and develop the Project Design Document (PDD). Only an organization accredited by the United Nations framework convention on Climate Change Conference (UNFCCC), can certify the PDD, i.e the Tüv Sud.
2. Chose a standard for registering the carbon offset, EcoFormation chose the voluntary market, Voluntary Carbon Standard (VSC Standard).
3. Apply a methodology to calculate carbon sequestration, for Madagascar project this is AR-ACM0002 of UNFCCC(see: [www.cdm.unfccc.int](http://www.cdm.unfccc.int)).
4. Implement the zoning and forestry management plan (FMP) and the guidelines of the Environmental Impact Assessment (EIA).
5. Obtain the validation for the forestry plantation (growth/sequestration) by the verification body.



➔ **94'452 CARBON CREDITS CERTIFICATES  
VALIDATED ON THE 4<sup>th</sup> OF APRIL 2014 !**

The TüvSud recognized us a sequestration capacity of 94'452 tCO<sub>2</sub>.

Project ID n°1327: [www.vcsprojectdatabase.org](http://www.vcsprojectdatabase.org)

## APPENDIX III : TRAINING PROGRAM

### MADAGASCAR EXAMPLE

Means	Site of 6'000 hectares			
	Training Centre with lodging and dining-hall			
	Shaded seedling and nurseries			
	Equipment for forest gardening and farming			
	Equipment for agricultural work			
Courses	Nursery gardener	Forest warden	Agro-forestry	Mechanics
	Seedling	Forestry	Soils	Basic knowledge
	Culture	Gardening	Farming	
	Plantation	Operating	Processing	
	Environment and Biodiversity			
	Agro-forestation (foodcrops)			
	Fight against livestock straying and brushfires			
	Work hygiene and health			
Ongoing	Maintenance for forest gardening and agro-forestation			
	Processes for increasing value of woods			
	Support in micro-enterprise launching			

# APPENDIX IV: OPERATIONAL AND FINANCIAL CONTROL

## CONTROLLING DE L'EXPLOITATION

- Internal controlling, thanks to the organization's structure
- Controlling conducted by EcoFormation people who are physically present at the cooperative
- Controlling and monthly reporting is executed by Master-degree students located on-site (Ecole Hôtelière de Lausanne, Haute Ecole de Gestion de Neuchâtel)
- Regular controlling carried out by EcoFormation
- Validation and certification by an accredited agency (Tüv Sud)
- Annual external audit

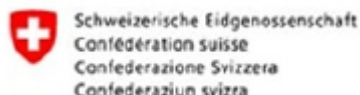
## THE CASH IS MANAGED BY ECOFORMATION

- Until the project can be autonomous (after min. 10 years), each organization has a treasurer, which attends training sessions and is included in day-to-day activity
- A detailed budget is defined. Expenses claims must follow the budget
- Cash is released once a week upon justification and track of the spending (correct amount, volume...)





## APPENDIX V : ECOFORMATION MAIN PARTNERS



Reforestation & agroforestry  
Restoration of biodiversity

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[www.ecoformation.org](http://www.ecoformation.org)