

Progress report ForestFinance 2015/2016

Regarding the leadership
declaration of the
initiative 'Biodiversity in
Good Company'



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Cover picture:

Sloths thrive in our sustainably managed cocoa forests in Panama and Peru. Augustin Fromageot took the picture of this one during the cocoa harvest in the Sisa valley in Peru.

ForestFinance is building forests – since 1995.

Having started as a green idea in Bonn, Germany, ForestFinance has become an international group of companies, offering direct investments in ecological afforestation and sustainable forest products to private and institutional investors worldwide.

All forest investment products are based on ecologically-sustainable forestry and the idea that all parties involved, nature and man, can benefit from ecological forest investments. For this reason, species protection and the promotion of biodiversity are part and parcel of the business philosophy of ForestFinance and an essential part of all its investment products.

Nevertheless, ForestFinance strives to further improve its species protection measures, particularly by monitoring the group's impact on biodiversity.

In order to find solutions and practical approaches for species protection in business life, hand in hand with other companies from different industries, ForestFinance has joined the initiative 'Biodiversity in Good Company' in 2010.

In this report we explain the progress that we have made during the past years with regards to species protection using the seven points of the leadership declaration, which we have committed ourselves to, as a guideline.

1. Introduction



Leadership declaration:

All signatory companies acknowledge and support the three objectives of the international "Convention on Biological Diversity"

- Conservation of biological diversity
- Sustainable use of its components
- Fair and equitable sharing of the benefits that arise out of the utilization of genetic resources

and commit themselves to:

1. Analyzing corporate activities with regard to their impacts on biological diversity;
2. Including the protection of biological diversity within their environmental management system;
3. Appointing a responsible individual within the company to steer all activities in the biodiversity sector and report to the Management Board;
4. Defining realistic, measurable objectives that are monitored and adjusted every two to three years;
5. Publishing activities and achievements in the biodiversity sector in the company's annual, environmental, and/or corporate social responsibility report;
6. Informing suppliers about the company's biodiversity objectives and integrating suppliers accordingly and step by step;
7. Exploring the potential for cooperation with scientific institutions, non-governmental organizations (NGOs) and/or governmental institutions with the aim of deepening dialogue and continuously improving the corporate management system vis-à-vis the biodiversity domain.

To demonstrate ongoing commitment, member companies will provide the Initiative with a progress report every two years.

1. The impact of corporate activities on biodiversity



Diversity is beautiful. All of these seeds come of native trees species planted by us in our sustainably managed forests in Panama.

Foto: ForestFinance

The protection and promotion of biodiversity are integral parts of the ForestFinance Group business concept. This means that the company's products and projects shall have positive impacts both on the environment and biodiversity in particular.

ForestFinance adheres to the principles of sustainability, including all of its three pillars, i.e. social, economic and ecological objectives. As a socially responsible company, ForestFinance contributes to the improvement of living and working conditions in the project regions by introducing social programmes and involving the local population. At the same time, ForestFinance offers its customers the possibility of a green investment which brings not only economic but also social and ecological benefits. The corporate slogan "building forests" emphasises the fact that ForestFinance creates ecologically valuable mixed forests instead of species-poor monocultures as they are known from conventional tropical forestry which often aim solely at maximum returns.

ForestFinance is "building forests" in order to be able to harvest sustainably and ecologically certified tropical fine timber for its investors. Only selected trees are harvested, there are no clear-cuts.

The reforestation of fallow, former pasture land with mixed forests mainly consisting of native tree species suited to the location, directly contributes to species protection in the project regions. ForestFinance has applied this reforestation concept in Panama for more than two decades. In addition, ForestFinance has been managing forest projects in Colombia, Peru and Vietnam for several years. Moreover, ForestFinance initiated two forest protection projects in Germany without timber production: the forest cemetery FinalForest and the forest reserve WildBeech.

Situated on the isthmus connecting two continents, Panama is one of the earth's rare biodiversity hotspots. The tropical rainforests of Central America are among the world's regions richest in species. Every tenth of our planet's species lives here; most of them are endemic. Towards the end of the 19th century, settlers began to clear-cut vast areas of primary forest in order to acquire farmland. This process accelerated in the course of the following centuries and has not been stopped yet. It is only in poorly accessible regions, such as mountains or swamps, that primary forest remains, allowing a variety of species to survive.

The reforestation projects promote biodiversity in the project regions by creating new, permanent near-natural secondary forests. The ecological benefits of the mixed forests, mainly consisting of native, non-invasive tree species suited to the location, are much bigger than those of monocultures. Only degraded areas such as fallow former pasture land, which could not regenerate autonomously, are being reforested.

In Panama, we are currently managing 59 ForestFinance fincas with a total area of 3,339 hectares, including 2,124 hectares of mixed forests consisting mainly of native fine wood species. 949 hectares of the total area are nature reserves. In particular, remnants of primary forest, wetland, and river areas are rigorously protected as they provide habitats for numerous amphibians and other species.

Since 1995, our employees have planted approximately 200,000 seedlings grown in our tree nurseries in five provinces of Panama every year. Half of those seedlings are native tree species such as Amarillo, Caoba or Zapatero.



Finca "Meteti I" in Panama – forest remnants (in the front) are supplemented through the reforestation of fallow and degraded areas (in the middle), forming a new, bigger forest habitat for animals and plants.



Aerial photograph showing the before and after effect: bleak pasture land borders a reforested area in Panama.

Photos: ForestFinance



The connection of forest remnants through reforestation results in an additional regeneration of the areas. New forests serve as an important stepping stone to build new biotopes: The newly created forest is soon inhabited by reptiles and birds feeding on insects. These animals are at the same time a natural remedy against pests, offering protection to the young trees. In addition, the project promotes the natural process of forest succession and regeneration. The great number and variety of native tree species in the mixed forest offers perfect living conditions for insects, birds and mammals. Numerous bird species and traces of bigger mammals such as the endangered ocelot have been seen on the ForestFinance project areas.



Since this year, we are also able to watch the fincas in Panama from above with a camera drone: From this point of view, we can analyse the growth and vitality of various tree species as well as quantities of carbon stored in the biomass and the development of the natural vegetation. Reports on animal observations in 2016 are included in chapter 4.2.

Our forests are a real paradise for birds such as this insect hawk (top) and lesser kiskadee on our finca Buenos Aires in Panama. Photos: Ovidio Jaramillo

In Vietnam and Colombia, ForestFinance acquires already existing acacia plantations in order to convert them into a similar near-natural forest ecosystem with mainly native tree species. Thus, the mutual objective of all ForestFinance projects worldwide, namely to create a permanent forest suited to the location, is put into practice in these countries, too. Up to now, approximately 2,500 hectares have been planted with acacia trees and 500 hectares with other tree species such as pine trees by ForestFinance in the Vichada region in Colombia. For our investors in Vietnam, we are sustainably managing 1,573 hectares. Sustainable forest management has been rather unusual in Vietnam. Promoting it is one of our project goals.



The seedlings for the reforestation projects in Vietnam are grown in tree nurseries. The investments in the ForestFinance product GreenAcacia create many jobs that are extremely welcome in the rural regions. Photo: develoPPP.de / Vostry

In Colombia, acacia trees improve the soil, preparing it for more demanding native tree species, which would otherwise not find enough nutrients in the deforested and degraded soils. The reason for this being that acacia trees filter harmful substances from the soil and enrich it with nitrogen, reconvert the degraded areas into a place for planting mixed forests that consist of species-rich tree varieties suited to the location. The goal is to create a permanent forest, with all its ecosystem services, one that is as close to a natural forest as possible.



Have you spotted the ocelot hiding in our acacia forests in Colombia? It is not the only big cat there; they are also frequented by jaguars. We are happy about the feline guests proving that our forests are accepted as migration corridors.

Photo: ForestFinance

2. Inclusion in the environmental management system

As set out above in chapter 1, the positive environmental impact of all business activities is already an essential part of the whole corporate concept itself. Besides high monitoring standards and strict controls through official third organisations “afield”, the ecological and social sustainability of the business is also being ensured in the office by our Quality Manager Iris Gerritsen, who closely cooperates with the project managers in the project countries and auditors from independent third parties. And they are having success: In 2015, the Forest Finance Service GmbH was honoured as a GREEN BRAND for the first time. In addition, our chocolate received a special reward. In the following, we present you new and expanded certifications since 2014 as well as awards for our outstanding environmental management.

2.1 Award for environmental management: GREEN BRAND

For its long-term outstanding commitment to environmental, climate and species protection, the Forest Finance Service GmbH was honoured as a GREEN BRAND in 2015. Thus, ForestFinance has become the first German environmental investment company with the eco-seal. The international, independent brand marketing organisation GREEN BRANDS honours sustainable products, services and ecologically sustainable enterprises on a regular basis.

The GREEN BRAND label is awarded to brands that verifiably are ecologically sustainable and deserve that their achievements are acknowledged on a national and international level. In particular medium-sized companies are in the focus of the GREEN BRAND jury, whose members work together with institutions from the environmental, climate protection and sustainability, but also from the market research sector.



In 2015, the Forest Finance Service GmbH became the first environmental investment company in Germany to be honoured as a GREEN BRAND for its long-term commitment to environmental, climate and species protection.

2.2 Environmentally conscious chocolate production from bean to bar

Our chocolate is also sustainable, from the tree to the final bar. The cocoa beans from the sustainably managed cocoa forests are fermented and dried in a solar-powered post-harvest station. The GPS data of the cocoa forest is printed on each package, allowing the consumer to track the socially and ecologically sustainable production of the beans while enjoying the chocolate. This becomes possible through the RootProof label, which was initiated by ForestFinance and which can also be found on all wood products. Another speciality of the chocolate produced in South Africa is the fact that it is climate positive, as the cocoa forests capture more CO₂ from the atmosphere than is emitted by the production and transport of the chocolate. This also convinced the sustainability portal "Rank a Brand": Our "ForestFinest" was ranked as best chocolate of 504 examined brands, products and companies. In 2016, the ForestFinest chocolate received an "A" again.

Further information is available at rankabrand.de and www.rootproof.org



Sustainable production from bean to bar: Marisol Najarro in our cocoa post harvest station in Peru.

Photo: ForestFinance





The mark of responsible forestry



ForestFinance forests have been certified by the FSC certification body Rainforest Alliance until 2013 and since February 2014 by SCS Global Services.



In Vietnam, the forest areas of our forestry service provider are FSC certified: www.forestfinance.de/go/benhai-fsc

2.3 Certified projects with sustainability guarantee

The ForestFinance project areas are certified and validated by independent third-party organisations on a regular basis to secure the quality of the forest and reforestation projects and their positive impact on biodiversity in particular. The following internationally renowned quality standards for forest projects are applied:

Forest Stewardship Council® (FSC®) Standard

The mission of the Forest Stewardship Council (FSC) is to promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests. The independent non-profit NGO was founded in 1993 as a result of the United Nations (UN) Conference on Environment and Development in Rio de Janeiro. The FSC Standard ensures a responsible management of the global forest resources by defining and monitoring the adherence to environmental and social standards of forest management. Therefore, timber and timber products that carry the FSC logo stand for a forest management that is environmentally appropriate, socially beneficial and economically viable. The FSC standards are based on ten principles and 56 criteria of forest management. Forests that are managed according to these standards can be FSC certified. Only companies adhering to the strict criteria of the FSC are allowed to use the FSC logo on their products. Independent third party certification bodies verify the use of FSC standards every year. The FSC is supported by numerous environmental organisations and unions.

All forests of the Forest Finance Panama S.A. that are reforested and maintained in Panama are reforested and maintained according to the guidelines of the Forest Stewardship Council (FSC). In the provinces of Chiriquí, Veraguas, Darién and Panama, Forest Finance Panama S.A. maintains 3,399 hectares. All mixed forests on this area used for timber production are certified under the FSC certification number SCS-FM/COC-004871. This applies to our products GiftTree, TreeSavingsPlan and ForestSavingsPlan as well as the no longer sold products WoodStockInvest and CacaoInvest (mixed forest part). FSC certified until 2014 by the Rainforest Alliance, since February 2014 by SCS Global Services.

Our product GreenAcacia Vietnam is FSC certified through our forestry service provider Ben Hai.

Please see www.forestfinance.de/fsc-greenacacia-vietnam for more information.

IMPORTANT NOTE: FSC and SCS Global Services are not responsible for and do not endorse any financial claims on returns on investments.

More information at www.fsc.org

UTZ Certified

At ForestFinance, we believe in fair working conditions and a direct involvement of the local population. About 100 employees are permanently employed in Panama alone, many of who belong to the indigenous Ngöbe-Buglé. We actively fight child labour. The improved working conditions are also certified by independent third parties in the frame of the UTZ programme. The UTZ programme enables farmers to learn sustainable farming methods, improve working conditions and take better care of their children and their environment. This shows consumers that working condition standards according to the ILO (International Labour Organisation) are met. ForestFinance cocoa forests in Panama have been UTZ certified since 2014. We also strive for a certification of our cocoa forests in Peru and already meet all requirements.

Gold Standard

The Gold Standard certification is the most internationally renowned quality standard for carbon offset projects. It was developed in 2003 by several environmental organisations, meeting all requirements. Since 2006, the Gold Standard also exists in the frame of the voluntary carbon market. Gold Standard certified carbon offset projects do not only aim at the reduction of greenhouse gases, but also to support the sustainable development of the respective countries. Only projects that involve the local population in the decision making process receive the Gold Standard certificate. Moreover, the certification proves that Gold Standard projects are real additional projects that would not have happened otherwise. The goals are similar to those of the Clean Development Mechanism in the frame of the Kyoto Protocol.

2.4 Newly and re-certified Gold Standard areas since 2014 and their impact on biodiversity and climate protection

ForestFinance is part of the implementation, maintenance and forest management of two carbon forestry projects with the aim of contributing to mitigation of climate change. The projects are located in Central and South America. Both projects include and manage different tree species, which are planted according to weather and soil conditions. Reforestation will increase biomass of the planting areas and sequester carbon dioxide (CO₂), which is one of the main Greenhouse Gases (GHG); and according to the Intergovernmental Panel on Climate Change (IPCC), one of the responsible gases causing global warming.

The projects CO₂OL Tropical Mix in Panama and Vichada Climate Reforestation in Colombia are part of the Gold Standard, one of the most recognised carbon standards worldwide, since 2013 and 2015 respectively. "Established in 2003 by WWF and other international NGOs as a best practice benchmark for energy projects developed under the UN's Clean Development Mechanism (CDM), Gold Standard was set up to ensure that projects delivered genuine emission reductions and long-term sustainable development."

(source: www.goldstandard.org)



ForestFinance cocoa forests in Panama are UTZ certified since 2014. The UTZ programme stands for a sustainable agriculture.



"Gold Standard Transition Projects" are labelled with this logo. They are managed by the Gold Standard Foundation since 2012.



A green oasis in the middle of brown savannah: our acacia forest in Vichada, Colombia.

Photo: ForestFinance

Gold Standard[®]
Climate Security & Sustainable Development

2.4.1 Colombia: Vichada Climate Reforestation Project

Location: Vichada, Colombia

Total area finca La Paz: 11,800 hectares

Gold Standard certified area in 2015: 3,276 hectares

The Gold Standard principles and criteria are also aligned with the United Nations Sustainable Development Goals (SDG) and the project has a great impact in SDGs number 13, 14 and 15; climate action, life below water and life on land respectively. An important initiative of the WWF is the protection of the river Bitá in Vichada. Due to its importance for biodiversity it has become an ecological symbol of the Orinoquío region, where the project is located. The natural wild life refuge will become the first protected river in Colombia. The Bitá River crosses a part of the project area and the project members are participating actively together with WWF and other regional stakeholders to cooperate in conservation strategies. The project designated a buffer of at least 15 metres along the shores of the rivers to keep them as restricted areas for conservation and prevent an impact from project activities. Furthermore, the project monitoring plan contains a chapter for monitoring biodiversity and to follow relevant changes.



Having fun at work: our forest engineers during monitoring in Boca del Monte, Panama.

Photo: Roger Gonzalez/ForestFinance

Gold Standard[®]
Climate Security & Sustainable Development

2.4.2 Panama: CO₂OL Tropical Mix

Location: various provinces in Panama

Total area: 3,399 hectares

Gold Standard certified area in 2015: 2,305 hectares

The project CO₂OL Tropical Mix is certified under the Gold Standard since 2014. In 2015 it was the first Land Use Forestry (LUF) to achieve a performance certification and also to generate verified credits.

Complementing this more than 250 hectares in the province Bocas del Toro are part of a cocoa agroforestry system and are managed under UTZ certification. Approximately 120 hectares are planted with cocoa and 80 hectares are a secondary forest under conservation using the High Conservation Value (HCV) approach.

More than 25 per cent of the total project area of CO₂OL Tropical Mix is classified as conservation area and was evaluated using the HCV principles. Cebaco Island, which is located off the Pacific coast, was included in the project, as well. As a result, the positive impact of reforestation with native species becomes visible once again. Even though the island suffered an intensive deforestation 30 years ago, this limited ecosystem has recovered and still contains endemic species; including unique bird species which exist only on the island.

Last, the project area located in Darién province has more than 2,000 hectares under protection. The area was classified by Conservation International (CI) as a biodiversity hotspot. According to Conservation International “[t]o qualify as a biodiversity hotspot; a region must have a high number of endemic plants and be threatened. Darién is also part of the WWF Global 200 list of global ecoregions and bioregions with high priority for conservation, due to a high threat to its existing native species and high ecosystem degradation.

At this point, we would like to introduce you to Sabine Wischnat, who is responsible for biodiversity at ForestFinance. We asked her in an interview, what matters to her when it comes to her work.

Interview with our expert for biodiversity Sabine Wischnat

Sabine, what was your reason for studying forest sciences and ecology?

Forest sciences as a study programme sparked my interest as it is a multi-disciplinary programme featuring components such as natural sciences, socio-economics, engineering and environmental protection. Also, it has a very practical relevance.

What is the significance of wildlife management in forestry?

Wildlife management is an important aspect of forestry that can also lead to conflicts. The forest provides living space for many animal species with habitat needs that are as varied as the natural forest itself. If the natural balance is disturbed, this can become a threat for extremely specialised species (such as the capercaillie in Germany) and result in a strong increase of more adaptable species (such as boars). For this reason, forest management should always take special ecosystems into consideration. Another aspect that is crucial to biodiversity is the fragmentation of the forests. Connected forest areas suitable as an ecosystem with a high grade of biodiversity, allow not only species protection and migration but also the exchange of genes, which is not or only with difficulties possible in the case of small forest areas spread like islands across the land.

Why did you choose tropical forests in general and Panama in particular as a working environment?

The tropical forests are very dynamic due to the constantly warm and mostly humid climate and the diversity of animals and plants is enormously high. Plants grow very rapidly and the development of a seed into a mature tree can be observed as if in fast motion. It is fascinating to watch this happening within a few years. Panama is particularly interesting as it is a bridge between the continents, where species from North and South America are meeting. The ethnical groups living in Panama also reflect this diversity.

Which tasks do your responsibilities regarding quality and biodiversity management at ForestFinance in Panama include?

As the plantations in Panama are managed in adherence with the FSC criteria, we are obliged to guarantee the compliance to the guidelines and to optimise processes when necessary. This includes aspects regarding good forest management as well as the social impact on the workers and neighbouring communities and the management of natural resources. Another part of the quality monitoring is the management of the data derived from the annual measurement of the trees on the sample areas that are part of every plantation. The biodiversity management includes working on measures to enhance the ecological value of the fincas and the evaluation of scientific studies concerning flora and fauna, carried out in cooperation with universities in our plantations. In addition, we strive to enter into dialogue with ornithologists and environmental activists, in order to examine what happens regarding the dynamics of biodiversity during the transformation of pasture land into plantations.

3. Appointing a responsible individual within the company



Sabine Wischnat is responsible for biodiversity related topics in our Latin American partner countries. Photo: private



Fascinated by the rapid tree growth in the tropics: Sabine Wischnat between seven-year-old Cedro Espino trees on the finca Morón in Veraguas, Panama.

Photo: ForestFinance

Have you ever met a rare animal in our forests and specifically in Bocas del Toro?

There are rather small big cats living on the ForestFinance fincas that are occasionally noticed by the workers and leave paw prints, in particular in the Darién. Birds can be watched very well and often, even rare species.

What do you like best about your work in the ForestFinance forests?

The forestry concept with a high share of native tree species is very exciting both from a forestal and an ecological point of view. Although Panama is a rather small country, we have several project locations with completely different conditions, resulting in forests differing in their natural species composition. Thus, every province has its own specialities you have to understand in order to adapt. This is a real challenge.

Species protection is always part and parcel of the ForestFinance business model; each of our projects aims at creating a sustainable mixed forest, which at the same time promotes biodiversity or provides the basis for a return of species through the re-naturation of degraded areas. All of the forests are certified according to various standards such as FSC, UTZ and Gold Standard to ensure both ecological benefits and transparency for the investors. This includes the documentation of the positive impact of the projects on biodiversity which has to be examined and verified by independent third parties on a regular basis.

In order to give our investors further information on the ecological and social benefits of the projects, we publish additional forest and project reports from the respective countries every year, presenting our activities, forestry methods and recent developments. In 2015 and 2016, additional biodiversity monitorings were conducted in our forests, which will be presented in the following.

4.1 Biodiversity study by experts of the Forest Stewardship Council in Panama in 2016

In May 2016, the biologists José Carlos García Salazar and Elliese Jayne Judge examined two of our fincas including natural forest segments in regard to their biodiversity. Both the forest in Mamóní valley and the finca Buenos Aires in Panama were classified to be of high biological value. The forest in Mamóní valley is a gallery forest growing on the riverside of the Rio San José that also prevents erosion. Many migratory birds were observed by the experts. The forest area on the finca Buenos Aires is part-time flooded by the Rio Metetí: a special ecosystem providing habitats for threatened animals. In the following, we only specify the animal species listed in CITES, as a complete list of all species documented by the experts would be too long for this report.

4. Defining measurable objectives



Nocturnal picture of a common basilisk in our forests in Mamóní valley in Panama.

Photo: José Carlos García



Where did that peeping sound come from? Surprisingly, it is the call of the *Rhaebo haematiticus*, which is native to Panama, resembling an alarm clock. This specimen was found in our forest in Mamoni valley. You can hear its call on the website of the Smithsonian Tropical Research Institute:

<http://biogeodb.stri.si.edu/bioinformatics/dfm/metas/view/30474>

Photo: José Carlos García



Not at all puffy: a puffbird on our finca Buenos Aires in Panama.

Photo: Ovidio Jaramillo



This banded cat-eyed snake wiggles its way quietly through our forest on the finca Buenos Aires in Panama.

Photo: José Carlos García

The following species listed in CITES were identified on the fincas Mamoni I and II:

Birds:

- *Elanoides forficatus*
- *Pseudastur albicollis*
- *Buteo swainsoni*
- *Herpetotheres cachinnans*
- *Milvago chimachima*
- *Brotogeris jugularis*
- *Pionus menstruus*
- *Amazona autumnalis*
- *Amazona farinosa* (Rote Liste der IUCN 2016)
- *Ramphastos sulfuratus*
- *Florisuga mellivora*
- *Phaethornis longirostris*
- *Phaethornis striigularis*
- *Anthracothorax nigricollis*
- *Heliomaster longirostris*
- *Chlorostilbon assimilis*
- *Amazilia tzacatl*

Mammals:

- *Alouatta palliata*

The following species listed in CITES were identified on the finca Buenos Aires::

Birds:

- *Buteogallus meridionalis*
- *Rupornis magnirostris*
- *Spizaetus tyrannus*
- *Herpetotheres cachinnans*
- *Caracara cheriway*
- *Milvago chimachima*
- *Falco sparverius*
- *Ara ararauna*
- *Brotogeris jugularis*
- *Pionus menstruus*
- *Amazona autumnalis*
- *Phaethornis longirostris*
- *Phaethornis anthophilus*
- *Phaethornis striigularis*
- *Amazilia amabilis*
- *Amazilia tzacatl*
- *Damophila julie*

Reptiles:

- *Iguana iguana*

Mammals:

- *Cebus capucinus*
- *Alouatta palliata*
- *Tamandua mexicana*

4.2 Intern biodiversity monitorings on our fincas in Panama

In 2015, a student of the University of Panamá, María A. Martínez A., examined the composition of tree species on the finca Los Monos. The forest is a secondary forest planted by ForestFinance approximately 20 years ago. On the finca Los Monos, the transformation of a plantation into a complex ecosystem becomes obvious, as the forest on this finca has already been classified as of high biological value with a high biodiversity (please see our biodiversity progress report 2013/2014 for reference). The student identified *Tetragastris panamensis* and *Virola sebifera* as dominating species. Both tree species produce seeds that are edible for animals.

In addition, our employees observed, among others, the following animal species in our forests in Panama in 2016:

- Howler monkeys (*Alouatta palliata*)
- Geoffroy's tamarins (*Saguinus geoffroyi*)
- Tarantula (*Sericopelma* sp.)
- Blue-headed parrot (*Pionus menstruus rubrigularis*)
- Black-collared hawk (*Busarellus nigricollis*)
- Grey-necked wood rail (*Aramides cajaneus*), IUCN Red List 2016
- Blue-crowned motmot (*Momotus momota conexus*)
- Boa (*Boa constrictor*)
- Parrot snake (*Leptophis* sp.)
- Red-tailed squirrel (*Sciurus granatensis*)



Howler monkeys are frequent guests in our forests. This one lives on the finca La Ocho in Panama.

Photo: Yaels Camacho/ForestFinance



Our cocoa forests in Peru are a paradise for tropical butterflies.
Photo: ForestFinance

4.3 Intern biodiversity monitoring in our cocoa forests in Peru 2016

Our cocoa forests are no cocoa monocultures, but complex agroforestry systems consisting of shading trees, rivers, forest remnants and individual old trees that are preserved. The cocoa trees in the cocoa forest planted by us four years ago are already more than two metres high, whereas the shading trees are five metres high. Within the scope of an intern biodiversity monitoring in the year 2016, we identified the following species there:

Butterflies:

- Dryas Julia
- Anartia fatima
- Junoniae varette
- Adelpha sp.
- Aenea sp.
- Historis odius
- Morpho sp.
- Hamadryas laodamia
- Philaethria dido
- Heliconius
- Eresia eunia
- Semomesia

Birds:

- Bubulcus ibis
- Coragyps atratus
- Cathartes aura
- Elanoides forficatus
- Leptodon cayanensis (Rote Liste der IUCN 2016)
- Falco rufigularis
- Ibycter americanus
- Geranospiza caerulescens
- Aramides cajanea
- Pyrrhura melanura (Rote Liste der IUCN 2016)
- Brotogeris cyanoptera (Rote Liste der IUCN 2016)
- Pionites melanocephalus (Rote Liste der IUCN 2016)
- Pionus menstruus
- Piaya cayana
- Crotophaga ani
- Opisthocomus hoatzin
- Pulsatrix perspicillata
- Glaucidium brasilianum
- Glaucis hirsutus
- Phaethornis superciliosus
- Thalurania furcata
- Galbula cyanescens
- Monasa nigrifrons
- Pteroglossus castanotis
- Ramphastos tucanus (Rote Liste der IUCN 2016)
- Oryzoborus angolensis (Rote Liste der IUCN 2016)
- Dacnis lineata
- Thraupis sayaca
- Progne chalybea
- Pipra manakin



A vulture flies above our project areas in Peru.
Photo: ForestFinance

Mammals:

- *Didelphis marsupialis*
- *Bradypus variegatus*
- *Saguinus nigricollis*

Amphibians and reptiles:

- *Micrurus surinamensis*
- *Micrurus ornatissimus*
- *Bothrops atrox*
- *Bothrops hyoprora*
- *Boa constrictor*
- *Atractus*
- *Dipsas catesbyi*
- *Philodryas viridissimus*
- *Imantodes cenchoa*
- *Chironius*



Sloths are very welcome in our cocoa forests in Peru.

Photo: ForestFinance



Banana plants grow next to cocoa trees in our agroforests.

Photo: Anders Espinosa



Busy bees: our smallest employees in Colombia.
Photo: ForestFinance

4.4 Bees, forest protection and migration corridors: our biodiversity goals in Colombia

In Colombia, we have set three goals in regard to biodiversity: Firstly, we want to establish our acacia forests as migrating corridors for big cats and other animal species; secondly, we want to preserve existing nature reserves in our forests in cooperation with NGOs such as the WWF; and thirdly, we want to transform the acacia forests into species-rich mixed forests in the long term. The afforestation with acacia trees is an important precondition for this endeavour, as this tree species accumulates nitrate in the depleted soil.

Conservation of natural habitats

The Rio Bitá in the Vichada region is up to now the only river under conservation in Colombia. Its riverside provides sound habitats for partly rare animals such as otters, caimans and pink river dolphins. In 2015, the Alexander von Humboldt Institute put the Rio Bitá under conservation. The ForestFinance acacia project partly borders the conservation area. Together with Colombian environmental protection organisations and foundations such as the Corporinoquia organisation and the Omacha foundation, the WWF and other NGOs, we strive to protect this natural living space.

Best practice at ForestFinance: Transformation of acacia forests into mixed forests

Investors, experts and stakeholders from the forest sector frequently visit the ForestFinance acacia project aiming at the transformation of acacia forests into biodiverse mixed forests. In April 2016, a delegation consisting of consultants of the Colombian president, local governmental representatives, various representatives of agricultural organisations and representatives of the Chinese embassy visited the ForestFinance project in order to inform themselves about and discuss similar development possibilities. Since our project in Colombia is one of the first of its kind in the region and ForestFinance has ten years worth of experience, the visitors particularly discussed planting techniques, fertilising and the management of nature reserve areas.

Bees for more biodiversity

Our acacia forests, which partly also include pine trees, are quite popular with bees. As pollinators, they are of great importance for the biodiversity in the region. We often find their honey combs between the twigs of the acacia trees. Therefore, it was the next natural step for us to produce honey on the finca. In 2013, we initiated first experiments and studies regarding honey production in acacia forest. As we needed queens to successfully start our project, we began to raise our own queen bees in 2014. From 2014 to 2015, we raised more than 500 queen bees. Since 2015, we have produced acacia honey in more than 200 bee hives. Up to now, we have harvested honey twice with an average harvest of 27 kilograms of honey per bee hive.

4.5 An interview with Burkhard Gutzmann: our objective in Vietnam – more sustainability in the field of forestry

We are also planting acacia forests in Vietnam. Our primary objective is the long-term transformation of these acacia forests into mixed forests – just as it is in Colombia. In this interview our forest engineer Burkhard Gutzmann talks about the ForestFinance plantation model and its meaning for biodiversity on site.

What makes the ForestFinance plantation model so special?

Unfortunately, sustainable forestry is still quite uncommon in Vietnam. Apart from a few national parks, sound natural forests are practically non-existent. Here, forestry mainly means: short rotation plantations and clear cutting followed by the burning of those cleared areas in preparation for new plantings. However, this method means destroying the remaining natural vegetation, which leads to a loss of nutrients as well as erosion. Also, the short rotation periods are responsible for wood with small diameters. Thus, the harvested wood can only be used as firewood or for the production of wood chips. Our approach, however, is to produce a certain amount of lumber for the construction and furniture industry through a longer growth period which, economically speaking, also benefits the forest owners. By not clear cutting and burning the forest areas we are preserving and supporting natural vegetation, reducing erosion and improving the soil structure as well as the nutrient and humus content of the soil.

Where do you see the benefits in this method?

Besides economic benefits, meaning the production of higher-quality wood, the main benefits are ecological ones. High biodiversity allows the local population to gather fruits and medicinal plants. Consequently, erosion is reduced, which is a great benefit for downstream landowners whose rice fields and water reservoirs, which are used for agricultural irrigation, are silting up. The entire water cycle is also being stabilised in the long run. A permanent forest with a sound soil structure is able to store much more water during rainy seasons and can therefore reduce the risk of floods, which means that there is enough water left during dry seasons.

How would you describe your relationship with forests and wood?

Wood is one of the most versatile renewable resources. Forests are the production sites of this fantastic resource and incredibly diverse natural areas. This has not always been the case and we should not be taking it for granted today. In the late '80s, when I decided to study forest sciences, it had already been predicted that there will not be any forests left in Germany by the start of the new millennium due to forest dieback and acid rain. Fortunately, this did not happen. However, forests are dying around the world, especially since they are basically treated as useless land reserves or mere settlement areas in many places. Additionally, forests are being destroyed through industrial agriculture. A period of 25 years, which is quite short for forests, already shows that forests are not rigid and unchangeable. They are quite flexible, similar to constantly changing organisms. This and the fact that the ecological and economical aspects are so closely connected is what makes working in and with forests so interesting for me. There is a new exciting challenge almost every day.



Dang Mai Dung and Burkhard Gutzmann are responsible for our project in Vietnam.

Photo: ForestFinance



WildBeech forest reserve: forester and bestselling author Peter Wohlleben ("The Hidden Life of Trees").

WildeBuche

4.6 Project goal biodiversity: WildBeech – species protection in Germany

Together with its customers, ForestFinance is conserving old beech forests in Germany for at least 50 years within the scope of the project "WildBeech" – and thereby preserving an unparalleled ecosystem. The forest reserve in Hümmele (Eifel region) is an ancient beech forest, which is rarely found today. The forest is home to rare animal species, such as wildcats, black woodpeckers and black storks as well as unique beetle species.

Germany has a responsibility

Germany has a particular responsibility towards the protection and the environmentally sound development of beech forest ecosystems – at a national, European and global level. The country is located at the centre of the beech forest range and accounts for about 25 per cent of the world's total area of copper beech forests. If natural vegetation had its way over 90 per cent of Germany would be covered with mainly beech forests (except for moors, swamp or marsh forests, flood plains, mountains or extremely arid regions).

In the course of (Central) European settlement natural copper beech forests have been reduced by a large amount. Especially old beech forests with trees that are over 160 years old only make up for 0.27 per cent of the total surface area of Germany.

The project area consists of such old, enclosed and rare beech forests. By now, the trees are about 200 years old and have been strictly preserved for many years. The main goal of this unusual approach is to build and preserve old deciduous forests in order for them to assume the role of primeval forests. Within the scope of the project the century-old forests on primeval soil are taken out of regular cultivation. This is happening at a time when the forests are at their highest ecological value which benefits the preservation and conservation of the ecologically precious and extremely rare forest habitat.

Supporting and preserving biodiversity

The amount of rare species is increasing noticeably: Hümmele is home to black woodpeckers, middle spotted woodpeckers, and black storks as well as timid wildcats. The high amount of waste wood, which is missing in cultivated forests, provides a habitat for over 30,000 insects and fungi species.

Copper beech trees are known for a high genetic diversity among their individual stocks. This diversity within the species is crucial to the adaptation to climate change. The old stock of trees includes genetically individual types that are also adapted to the local environment, which makes it particularly precious.

We report on all our activities and achievements regarding biodiversity on a regular basis in various publications. Every year, we publish project reports and a detailed annual report for our customers, who can download them in the customer area on our new website. In addition, you can read about our activities in our newsletter, on Facebook or other social media platforms.

Moreover, ForestFinance publishes a magazine in German that is sent to customers, business partners and other shareholders and deals with topics such as forestry, ecology and green investment. You can find our previous ForestFinest issues at:
www.forestfinest.de

5. Publishing activities and achievements in the biodiversity sector in reports



Many reports can be downloaded from the ForestFinance website.



The ForestFinest magazine is both entertaining and informing.

6. Integration of suppliers



An acacia tree growing in the forests of our forestry service provider in Vietnam.

Photo: ForestFinance

ForestFinance administers the forest management at the project locations mainly with their own forest units. At other locations, ForestFinance works together with service providers who implement the forest management plan according to the specifications of ForestFinance and under strict supervising.

All ForestFinance experts at the project locations are trained in our sustainable forest management system.

At our new project location in Vietnam, we were confronted with the reality that forestry experts were not sufficiently trained in sustainable forest management techniques. The commonly known forestry practice is still the out-of-date slash-and-burn technique, which does not only deplete the soil, but also does not offer any basis for new species to establish populations. For this reason, we have taken the initiative to develop a further education programme in sustainable forest management in Vietnam (we reported in progress report 2011/2012). The further education guidelines ForestFinance worked on together with SEQUA and German Federal Ministry for Economic Cooperation and Development in the frame of the project have become mandatory for the whole province of Quang Tri, as decreed by the people's committee: a benchmark in the sustainable forestry related development of the country.

Apart from that, we consider it to be of utmost importance to raise awareness for species protection among our investors. For this reason, we use various media such as our newsletter or our customer magazine ForestFinest to inform our customers on a regular basis about the topics such as biodiversity and ecosystem forestry. Our website includes an area dedicated to ecology which also addresses the topic of biodiversity in order to explain our strategies and goals to our customers and business partners.

Cooperation with forestry service providers

Just like ForestFinance, our forestry service providers pay attention not only to the (ecological) quality of the planted forests, but also to the social conditions under which our forest employees work. This is guaranteed by our own supervising employees, who have long-term experience and by independent third-party organisations such as the SCS Global Services, who examine and certify our forest projects on a regular basis. When required, ForestFinance organises trainings with its own forest experts for its external workers, regarding all relevant topics and techniques from safety at work to sustainable thinning methods.

Quality, experience, and synergy effects

The decision to let parts of our forests be managed by forest service providers was made in order to benefit from synergy effects and to make growth possible. When choosing providers, criteria such as their experience with native species, social and ecological sustainability, the production of high-quality timber and the realisation of maximum yields for the forest owners play a major role. Of course, it is also of importance that the company meets the other ecological and social standards of the ForestFinance Group.

Part of the profit is directly re-invested in the improvement of infrastructure, schools and leisure facilities at the project location. Environmental education and social programmes are supported as well as the on-going further education and professional development of the employees. The close cooperation with leading scientists in tropical forestry and the knowledge transfer among ForestFinance forest managers and engineers guarantee continuous technical development – which benefits our customers.



On the finca Boca del Monte in Panama, ForestFinance employees measure the areas together with the employees of our forestry service provider.



On the "Coastal Clean up Day", ForestFinance employees clean the beach of Las Lajas together with ANAM and pupils from a school in Chiriqui.

Photos: ForestFinance/Silke Berger

7. Cooperations

Science and research in the forest are of great importance to ForestFinance and an integral part of the company's structure. Therefore, ForestFinance does not only cooperate scientifically with numerous renowned institutions, but has also developed new products and technologies on its own, which make for instance, harvest and monitoring more easy. The annual investment in research amounts to approximately 25,000 to 30,000 US dollars. Amongst other institutions, ForestFinance co-operates scientifically with:

Smithsonian Tropical Research Institute, Panama:

permanent co-operation in research concerning the growth of native tree species.

Prorena Project /Smithsonian, Panama:

long-term monitoring of the development of native tree species

University of Panama:

student research projects, field tests

CATIE (Centro Agronómico Tropical de Investigación y Enseñanza), Costa Rica:

development of cacao plantations with a higher resistance to pests

Technical University of Munich:

master theses, optimisation of agricultural forest systems in economics and agriculture

Institute for World Forestry, Hamburg:

risk assessment for forest investments

Autonomous University of Chiriqui, Panama:

field trials



As we are a member of numerous organisations, these are only some examples of our co-operations:

Together with the Rainforest Alliance, Aliarse, CATIE, Chiquita Brands, RUTA, REWE, GIZ, Corporacion Bananera Nacional, Universidad para la Cooperación International and other organizations, ForestFinance has founded the initiative **Biodiversity Partnership Mesoamerica**. Its goal is to promote biodiversity projects in Central America. Its members are going to initiate, develop, and fund projects in the region. In addition, the partnership will serve as a networking platform for all private, non-profit, and scientific institutions that are committed to species protection. These institutions and other members of the initiative will start at least three projects every year, focusing in particular on agroforestry, climate protection and the conservation of forest reserves for species protection.

ForestFinance is a member of the **Ciudad del Saber**, a non-profit foundation domiciled in Panama. The name of the foundation can be translated as “City of Knowledge.” Since 1995, the Ciudad del Saber offers a platform for a variety of projects, companies and their ideas, in order to support collaboration and progress and in particular concepts that represent sustainability, innovation and ecology. The foundation focuses on topics related to information technologies, biosciences, environmental management, and human development and cooperates with companies on the basis of sustainable management strategies.





When a sloth cub loses its mother the APPC steps in.
Photo: APPC Panama/ Eduardo Estrada

7.1 Protecting sloths in cooperation with the Pan American Conservation Association

ForestFinance is building forests and at the same time creating protected habitats for sloths. But we want to do more! That is why, in 2016, we launched a special campaign in cooperation with the APPC (Pan American Conservation Association): ForestFinance used part of the proceeds of every TreeSavingsPlan, GiftTree or ChocolateTree purchased with a certain code until 31 December 2016 to financially support the APPC sloth project. Since its founding in 2005, the APPC has rescued more than 3,500 wild animals, returning more than 90 per cent of them to their natural habitat – about one third of which were sloths.

Sloths often get hit by cars; they are being electrocuted or attacked by stray or farm dogs. They are often kept as pets, as well. However, as soon as people do not want to be bothered with them anymore, they are being abandoned. That is when APPC employees step in. They take care of the sloths and release the fittest animals into their natural habitat as soon as possible. In order to be able to continue with their work, the APPC is always in need of money but also land area.

Find out more about the APPC at: www.appcpanama.org

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The Forest Finance Service GmbH was the first German company worldwide to receive the FSC Global Partner Award in the category "Financial Services".

In 2015, the Forest Finance Service GmbH became the first environmental investment company honoured as a GREEN BRAND for its long-term exemplary commitment to environmental, climate and species protection.

