Tackling deforestation at the roots

Concrete solutions to adapt and attenuate climate change, over here and over there
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Press release
Paris, 26 November 2015

TACKLING DEFORESTATION AT THE ROOTS

Thursday 26 November 2015, four days before COP21 gets underway, Envol Vert recalls how urgent it is that we take action against climate change by protecting the forests. Climate change is a reality and can be felt across the world, especially in tropical countries where 80% of deforestation occurs. We thus need to apply the concepts aimed at attenuating and adapting to climate change over there, in those countries but also here, in our western countries where we make massive use of the products associated with deforestation.

Witnesses to an emergency!
Via its local partners and through the work it does every day in the field, Envol Vert is a first-hand witness to the impact of deforestation on the climate. One example is the Colombian Caribbean coast which suffers from the El Niño phenomenon, the intensity of which increases constantly. As the forests are destroyed, the meteorological balance is threatened. Through its projects to support the development of alternatives to deforestation, such as ecotourism and agro-forestry, Envol Vert demonstrates that there are solutions available: these pilots have now proved their worth and could be duplicated and rapidly made more widespread - so why wait? Some of these projects help attenuate changes to the climate locally while others are a way of adapting to inevitable change, particularly with regard to agriculture, and some of them even bring both benefits. COP21 should mark an increase in funding for conservation of the forests and should give the fight against deforestation its rightful place in the Protocol that will define the resources and ambitions of action against climate change after 2020.

Local solutions for global changes
In Colombia, Envol Vert works to develop silvopastoralism on the Caribbean coast to show the ranching can and should be done among the trees. Trees retain earth, feed the soils and animals, and protect biodiversity. In Nicaragua and Peru, Envol Vert is involved in agro-forestry with the goal of improving farm crops. Everywhere, trees are the solution. The inga (sweet pea) is used in Nicaragua while in Colombia, we plant Noya Maya, a magic tree that provides feed for domestic and wild animals but for people too. It also captures CO2 in the atmosphere to store it in the soil and thus improve its fertility.

The aim of the Forest Footprint? “Deforestation-free” goods!
Envol Vert also heads a series of actions in France designed to protect the forests from the threats induced by our consumer goods. According to the European Commission, Europe is the biggest importer of commodities associated with deforestation (36% of goods produced through deforestation end up in Europe¹).
To highlight this issue, we have produced our own awareness-raising tool: the Forest Footprint, which illustrates the link between our consumption over here and deforestation over there.

¹ http://ec.europa.eu/environment/forests/impact_deforestation.htm
Europe also has to make sure that the goods imported do not come from illegal deforestation. A policy in this respect is currently being drafted for paper pulp and wood (European Timber regulation) and absolutely has to be rolled out during COP21 for all high-risk commodities. Consumers are highly aware of deforestation issues and need to be informed about the Forest Footprint of the goods they buy, so that they can consume in a more responsible manner. **There is no time to waste: all companies that use commodities associated with a risk of deforestation have to introduce and apply a robust and effective “deforestation-free” policy!** All of these commitments must be given political backing with the signature of a binding Protocol on a significant reduction in the States’ GHG emissions.

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*Envol Vert* is an association for the protection of the forest and biodiversity, endeavouring to reconnect people with their environment and help local populations live in healthier surroundings providing them with resources. As such, it supports small-scale projects inspired by local initiatives in France and Latin America: primary forest reserves, scientific monitoring, alternatives to deforestation and reforestation. Its motto – “The forest helps us, so let’s help it!” – invites companies and individuals to commit to this noble cause.

Find out more:
- [http://www.facebook.com/EnvolVert](http://www.facebook.com/EnvolVert)
- [http://www.youtube.com/user/envolvert](http://www.youtube.com/user/envolvert)

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Climate change seen from the field

With the work it does every day in the field, Envol Vert is a first-hand witness to the impact of deforestation on the climate on the Colombian Caribbean coast, an area subject to the El Niño phenomenon, the intensity of which increases constantly. As the forests are destroyed, the meteorological balance is threatened. Our account here shows how climate change is already at work.

Along the Cordialidad that links Cartagena to Barranquilla on the Colombian Caribbean coast, there are a number of rangelands where herds scour the grasses – parched and yellow in the dry season – to find food. Turn a corner and you’ll come across a group of houses — this is the village of Los Límites, formed around just two streets. From the houses built from earth or cement, you can see a herd of buffalos, huddled under the only tree to shelter from the searing heat of June.

Although this is supposed to be the middle of the first rainy season, the village’s farmers are waiting, with a mixture of indifference and anxiety, for the first rains to fall. The last significant rainfall was in January and there’s not a hint of a cloud in the sky. On the farms, there are a few manioc plants among the weeds that withstand the drought on the baked clayey soils. Most plots have not been planted because of the lack of water.

The El Niño phenomenon is being felt strongly this year, with a considerable lack of rainfall across the Caribbean region. According to the Colombian meteorological institute, there has been 75% less rainfall in the region in June compared to a normal year. Between 1st January and 30 June 2015, total precipitation amounted to just 39mm, which is totally inadequate to grow maize, chilli peppers and the other crops usually found here. While El Nino may explain this year’s drought, it would seem that there is a trend towards a variable, unpredictable climate. As Juan, one of the village farmers, tells us: Thirty years ago, we knew we’d be able to plant in mid-March, with the first rainfall. Now, it’s never before April or June. We never really know when we are going to be able to sow our crops.

This is the second consecutive year of drought in the region. Yet in 2012, crops were devastated by torrential downpours leading to heavy floods. For six months now, the village farmers have not been able to harvest and with the drought, there is no point in planting. To deal with this, almost all of the farmers have been cutting down trees to make coal.

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3 Données del Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM), Colombia.
We can see large stacks of chopped wood. It’s a very difficult job. When we’re making coal, we have to spend the whole week watching over the stack, day and night. The coal is sold at a low price and the smoke often makes us ill. Nobody likes doing this, but we don’t have much choice, Tomas tells us.

While this is the only income-generating activity available, it simply speeds up deforestation and increases the impact of the drought and torrential rain. The ranchlands have long since taken over the original dry tropical forest, a very specific ecosystem which has lost more than 90% of its original wooded surface area in Colombia. In the area around the village, there are two private reserves belong to haciendas, the only lasting remains of these ecosystems.

Envol Vert is working with local farmers on a reforestation project focused on agro-ecology (see page 9).

A few key points

The forest: an irreplaceable element in the meteorological balance
Forests have an impact on precipitation across the planet. Trees absorb and discharge huge quantities of water. This water forms clouds which give rain. Forests work like pumps, pushing precipitation from coastal zones to the interior of continents. In 2005, Nasa revealed that forest fires and their smoke prevented cloud formation and reduced rainfall. In 2009, the US National Academy of Science report stated that historical deforestation in India triggered changes to the monsoon, reducing rainfall by 30%.

The consequences can be observed well beyond the region where deforestation occurs. The Amazon thus influences rainfall as far away as Texas, while the rainforest in Central America affects precipitation in the Midwest; the tropical forests of southeast Asia have an effect on rainfall in China and as far as the Balkans.

The El Niño phenomenon
In a normal year, winds blow from the east, cross the 17,000 km of ocean and accumulate warm, humid air over northern Australia and the great Asian archipelago. […] The winds are so regular that they create a surface current from the west, accumulate warm water along the coasts of Asia and give the Pacific a sloping surface (it is 50 cm higher in Australia than in Peru!). This westward current is offset along the Pacific coasts by the cold Humboldt current, which provides Peru and Chili with its fish resources. […]

In an El Niño year (El Nino means “the child” because it arrives just before Christmas), the winds and therefore the currents cease. Australia and Asia, which should be subject to rain, find themselves with a dry climate that is harmful to the paddy fields and causes forest fires, while the South-American deserts and coast experience torrential rainfall. Although the phenomenon is well understood by the scientists, the connections via which the effects of El Nino are felt over such great distances remain a mystery, with drought in the Amazon and India, and storms in California, for example. El Niño, which appears at irregular intervals has become more and more regular over recent years.


6 Copied (and translated) and inspired by the work “La condition tropicale” by Francis Hallé, published by Babel (page 109)
Noya Maya: a magic tree and an alternative to climate change

The Noya Maya is a native tree of Central and South America and has some quite unique properties: it stores carbon in the ground, thus helping to reduce the intensity of climate change. Its leaves and fruit feed livestock while improving soil quality and reducing the need for ranchlands to replace the forest.

A tree that captures CO2... in the soil too!

Like all trees, the Noya Maya or *Brosimum alicastrum* captures atmospheric carbon (CO2 atm). As the tree grows, the carbon is stored in its branches, trunk, roots and its organs. The growth of any tree therefore reduces the CO2 in the atmosphere, thus reducing the intensity of climate change.

However, the Noya Maya has a unique quality. It also stores atmospheric carbon in the soil, thus functioning like a “carbon sink”, with atmospheric carbon transferred to the ground for the long term.

An explanation

A very specific process takes place within this tree - the oxalate-carbonate pathway (OCP). But how does it work? Through photosynthesis, atmospheric CO2 is captured by the tree and specific cells use the carbon from the CO2 to create a mineral compound. This compound is found in the tree’s tissues, such as the bark. When these tissues fall to the ground, bacteria turn the mineral compound into a different compound, known as ion carbonate, which can be combined with calcium. Ion carbonate associated with calcium forms a stable compound in the soil. In this form, the carbon stays in the soil durably and the soil’s carbon content increases\(^7\). This is why we call the tree a carbon sink: it transfers carbon from the atmosphere to the soil, for the long term. This process is only seen under certain climatic conditions and on certain soils.

A tree to feed the livestock

Ranching – a major cause of deforestation

In Latin America and the Caribbean, there was a net loss of 10 million hectares of forest between 2010 and 2015 alone (*equivalent to deforestation minus reforestation, according to the FAO Report on the State of the World’s Forests 2015*). The reason? Agriculture is the reason behind 80% of deforestation. Cattle ranching, which increasingly supplies Europe with leather, is the main culprit. Due to the low nutrient value of the soils, a single cow needs a large plot (an average 1 to 4 hectares). Forests are thus burnt to make way for ranching.

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\(^7\) Cailleau et al., 2004; Martin et al., 2012
The Noya Maya: an alternative to deforestation for ranching

Not only can Noya Maya exist alongside livestock, but it is actually a solution for deforestation: this ancient tree is of high nutritious value for the cattle.

The leaves and fruit of the Noya Maya can be used as fodder for animals. Under natural conditions, the leaves produced by the tree each year can reach between 400 and 800kg. Young Noya Maya plantations produce twice as much fodder per hectare as a hectare of established grasslands. According to the Maya Nut Institute, when it reaches 8 years of age, one hectare of a Noya Maya plantation can provide fodder for 30 cows a year.

A dairy cow can eat up to 15 kg of Noya Maya fodder a day. The digestibility of the dry matter from that fodder is high, ranging from 55% to 67%. In addition, consumption of the leaves, fruits and bark increases milk production among animals (and humans) due to their high lactogenic compound content. Another benefit is the fact that the cows eat the fruits and leaves only when they fall to the ground, which happens in the dry season when little other fodder is available.

A tree to feed people

Chemical analysis of the nuts has demonstrated their high nutritional value. There are more raw proteins than in maize and the nuts can provide a significant proportion of the nutrient requirements of the human diet (in the form of a powder made from the nuts). Butterflies, tapirs, monkeys and cotton-top tamarins have all got it right: they all eat the products of the Noya Maya tree.

A tree that serves the soil

Another benefit of the Noya Maya is that it increases soil pH locally. Tropical soils are often too acidic so the Noya Maya helps improve soil quality. In turn, this boosts the crops produced in the agro-forestry system. In Mexico, in the Yucatan peninsula, the Mayas used the tree as a key element in their agroforestry system.

All about the Noya Maya: [here](#)

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6 (SARH-INIA, 1976; Pardo~ Tejeda y Sánchez, 1980; Chavelas y Devall, 1988; López, 1993)
7 Medina, 1949; Yerena el al.,1978
8 Martínez, 1936
9 Carranza-Montano et al., 2003
10 The propagation of Ramon (Brosimum alicastrum Sw.; Moraceae) in Mayan homegardens of the Yucatan peninsula of Mexico; A.R. GILLESPIE, and al.; 2002).
Agro-forestry and silvopastoralism: responses to deforestation and climatic variations

In Colombia, Peru and Nicaragua, Envol Vert is able to present some tangible examples of sustainable development at work for the environment while providing economic alternatives and greater social well-being for the beneficiaries.

Definitions

**Agro-forestry** is a way of exploiting agricultural land using tree plantations mixed with crops or livestock grazing.

**Silvopastoralism** is a sustainable form of management reconciling forestry and livestock objectives. In this type of livestock farming, animals graze in the forest to make the most of the fodder available at the foot of the trees. At the same time, thinning work can be done to help with tree development and enable timber production.

The Noya Maya in Colombia

*Colombia lost 6.2 million hectares of forest between 1990 and 2010, mainly due to ranching. This type of farming should only have covered 8 million hectares. It now covers... five times more than that, spanning 32% of the territory. Non-sustainable livestock practices are preferred to the detriment of the forest and the ecosystem. Envol Vert puts the concepts of agro-forestry and silvopastoralism to the test on site.*

In 2014, Envol Vert started work on a project with farmers from Los Limites, who are feeling the full effects of El Nino in the dry forests on the north coast of Colombia. This is a project focused on reforestation and aid for agricultural output, to re-establish the natural balance in a portion of the dry forest. It features the Noya Maya as its main component, to create a system of silvopastoralism enabling cattle ranching with a much lower impact on the forest.

There are plans to plant nearly 34 hectares with endemic tree species to develop plots for an agro-forestry system. The trees will capture CO2, provide shade, keep more moisture in the soil and increase the soil’s fertility.

In addition, the trees will allow for more diversified production on the plots providing edible fruit or nuts. The farmers also see a possibility of improving food security and developing a sustainable economic alternative. For cattle owners, this will be an opportunity to put more cows on a smaller area, which is one of the strategic goals of the FEDEGAN (cattle ranchers’ federation), while maintaining the ecosystem services rendered by the forest, such as a reduction of CO2 in the atmosphere. The project is funded by Maisons du Monde and Man and Nature.
Sweet peas to replace slash and burn in Nicaragua

This project is run in Nicaragua, in the south of the country towards its border with Costa Rica, in the Bartola community in the Indio Maiz reserve. The community is made up of 26 families with a total of 190 inhabitants. They are found in the buffer zone around the country’s second biggest reserve: Indio Maiz, an area particularly subject to deforestation. Their crops are mainly subsistence crops and suffer from low and unpredictable yields when they are planted in the forest following slash-and-burn clearing.

Inga cropping mixes Inga edulis with other crops (maize, beans, malanga, pineapple and the like) to enable better yields even where soils are initially very poor. The Inga is a tree offering numerous benefits: it helps nitrogen build up in the soil and provides organic matter; it is very effective in terms of nutrient recycling and allows for better weed control. Agro-forestry based on the inga was developed thirty years ago by Mike Hands, an agro-botanist and specialist in tropical environments. He now shares his technique via the Inga Foundation and supports farmers through the change towards what is currently one of the only viable alternatives to slash and burn. The Bartola farmers have been able to see the benefits of Inga for themselves at a pilot farm and are now applying the technique on their own farms, with help from Envol Vert, to replace slash and burn.

Understanding Inga Cropping: a video

Other projects have been set up in Latin America by Envol Vert, including an agro-forestry project based on coffee in Peru and a silvopastoralism project in Nicaragua. Contact us to find out more.
Find out your Forest Footprint and then work on reducing it!

Envol Vert works to highlight the impact of deforestation on the climate. It is vital that we protect the tropical forests which are biodiversity and carbon reserves, regulate the climate and provide a source of economic subsistence for local populations. EV thus expects COP21 to: put a permanent and immediate end to the transformation of natural forests for the production of commodities for consumer goods, and ensure the rapid multiplication of projects for alternatives to deforestation involving local populations. Envol Vert also calls on Europe to commit to an immediate end to the import of commodities associated with deforestation.

Europe is the world’s biggest importer of commodities associated with deforestation and has to make sure that the products it imports do not have any direct or indirect impact on the forests. A policy in this respect is currently being drafted for paper pulp and wood and should to be rolled out during COP21 for all high-risk commodities. A system has to be set up to monitor the binding commitments made, so that governments in forested countries such as Indonesia stick to their commitments to reduce emissions through tangible measures. The first measures were mentioned at the time of the “Forest Declaration” made during the UN’s New York summit last year and they should be made mandatory and rolled out immediately. If COP21 is to be a success, deforestation has to be tackled at the roots, insists Boris Patentreger, Envol Vert’s co-founder.

To put a rapid end to this ecological disaster, Envol Vert is calling for the immediate introduction of a multi-party Deforestation-Free plan.

- The governments will need to provide massive support for small-scale planters in return for a ban on slash and burn methods, so that farmers can increase their yields by means other than expanding their arable surface areas; they should also stop issuing operating permits in peat zones and areas of natural forest, and monitor fires and deforestation via satellites. Then, they should create a special public agency in the field to ensure coordinated action in compliance with the law. This is vital if we are to meet the commitment on lower emissions that the countries at COP21 are set to make.

- Along the entire chain of production and consumption of commodities associated with deforestation, such as palm oil, soy, paper, wood, leather, minerals, sugar cane and even fruit, tea and coffee, companies have to sign up to Deforestation-Free commitments and involve their suppliers in the process while remaining fully transparent along the whole chain. They have to be fully transparent about their approach while making sure their commitments are effective; then, proportional to their responsibility, they have to develop projects in the field to ensure good practices are applied among all stakeholders linked to their chain.

- Europe, the world’s biggest importer of commodities associated with deforestation, has to implement an action plan designed at eliminating those commodities from its imports.
Consumers are highly aware of deforestation issues and need to be informed about the Forest Footprint of the goods they buy, so that they can consume in a responsible manner.

Tangible actions need to be introduced urgently with the extension of the Flegt facility to commodities other than paper or the introduction of public purchasing policies that exclude products contributing to deforestation.

A number of worthy actions have already been launched, such as the Deforestation-Free commitment from a number of companies, but these commitments need to be extended to include all commodities. The role and commitment of commodity traders, the main channels for product flows, are vital when it comes to setting up sustainable actions.

The moratorium on soy from the Amazon has been successful, especially with the levels of deforestation avoided; it should now be secured for the long term and extended to other fragile ecosystems.

During COP21, Envol Vert will be watching to make sure that deforestation is tackled at the roots, while continuing to inform on the risks of deforestation related to our consumer habits and asking for a complete halt to the transformation of natural forests into arable land to produce the commodities used for consumer goods.

The online calculator
http://empreinte-foret.org/quizz


The background work on the Forest Footprint and its expert committee:

Links between consumer goods and deforestation, per product (bottom of the page):
http://envol-vert.org/lien-deforestation-et-consomation
Envol Vert, nearly five years of action to protect the forests

Our purpose: protecting the forest and biodiversity
Envol Vert is an NGO for the protection of the forest and biodiversity in France and Latin America, founded in 2011. It provides its backing for tangible projects that work directly with local communities to find solutions for deforestation.

Our goals:
• support small-scale local, effective projects to tackle deforestation, protect biodiversity and reduce CO2 emissions.
• support solutions found locally and encourage the development of conservation initiatives by helping to set up projects, structure them and develop skills.
• make sure that the projects offer added social value by providing new sources of income for local populations.
• raise awareness among the public and businesses about the services that nature and the forest render.

Our vision:
Envol Vert is an association for the protection of the forest and biodiversity which endeavours to reconnect people with their environment and help local populations live in healthier surroundings providing them with resources.

Our projects:
Forest conservation and scientific monitoring,
Alternatives to deforestation (ecotourism, silvopastoralism, agro-forestry),
reforestation of damaged areas.

Envol Vert helps operators in the field (local associations, cooperatives, residents’ groups, etc.) to set up or continue with projects with support to draft and structure the project, training for stakeholders, skills support and help with raising funds.

Its motto – “The forest helps us, so let’s help it!” – invites companies and individuals to commit to help protect the forest.

Our achievements:
In less than five years, we have planted nearly 60,000 trees, trained nearly 600 people, worked in four countries to protect the forests via eight projects, launched a festival to promote biodiversity in Colombia, obtained commitment from the head of shoe company Eram to make sure that their leather does not come from deforestation in the Amazon, launched the online Forest Footprint tool, gained commitment from French civil society through the work of nearly 50 volunteers a year... and much more!

There is still a lot to do and we are counting on everyone to get involved!

Find out more:
• http://envol-vert.org/
• http://www.facebook.com/EnvolVert
• http://www.youtube.com/user/envolvert
Envol Vert at COP21: programme

For the full duration of COP21, Envol Vert is organising a number of actions aimed at raising awareness among politicians and the public about the effects of deforestation on the climate.

- 30 November to 11 December, from 10:30 to 19:00 at Le Bourget
  Envol Vert will have its own stand in the space devoted to civil society, where it will present the association, its actions in the field and the European Forest Footprint. Many thanks to Maisons du Monde, Envol Vert’s partner at the event.

Meet us:
- Wednesday 2 December - 14:00 - 16:00: Boris Patentreger, co-founder, “What impact do our consumer habits have on the destruction of the forests? Presentation of the European Forest Footprint”
- Thursday 3 December - 11:00 - 12:30: Daisy Tarrier, Founder and President, “Envol Vert: a witness to climate change. The Case of Colombia”
- Wednesday 9 December - 11:00 - 12:30: Daisy Tarrier, Founder and President, “The Noya Maya, a tree with multiple virtues and a symbol of hope for the most threatened regions in Colombia”

Activities:
- Calculate your Forest Footprint: online calculator used to measure the impact on the forests of our consumption – the main cause of global deforestation.
- “The Tree Game”, a kind of “Trivial Pursuit” marked out on the ground, taking us up a tree of questions on the theme of local populations, biodiversity, services rendered by the forests and the Forest Footprint, from the tree’s roots up to its canopy.
- 11 December (on the Fondation Nicolas Hulot stand), forest-themed entertainment and cocktails.

- 6 December 13:00 to 19:00 at LE POINT EPHEMERE
  Envol Vert will be taking part in the Ethical Consumption Day. Organised by Handcrafted Films, this event will bring together different stakeholders for whom the management of natural resources is a local concern.
  Envol Vert will talk about its action with local communities, its “Tree Game” and the Forest Footprint. Other partners present: Rainforest Alliance, YCC, Stand for trees, FSC.

- 10 December from 12:00 to 18:00
  LE GRAND PALAIS - COP21 Solutions
  To promote the forest, Envol Vert is teaming up with architect Alexis Tricoire, who will be exhibiting a wonderfully unique plant structure in the centre of the Grand Palais throughout COP21. Inside his structure – a hut built from plants – a film will be shown, illustrating the effects of climate change.
  The artist is inviting visitors to make a gesture for the forest and buy the plants from his structure, with the proceeds going to Envol Vert (€10 per plant). There are around 600 plants on sale.