

UNDERSTAND  
ALERT  
**TAKE ACTION**  
FOR THE FORESTS



reforest**ACTION**

## WHY WE NEED TO UNDERSTAND THE ROLE OF THE FORESTS...

For many people, forests are far removed from their everyday routine. Yet they are of immense value.

The forest is now undisputedly recognised as a solution in the fight against climate change (combined with the inevitable efforts to reduce our carbon footprint), but it has so much more to offer! It is the source of numerous **nature-based environmental, social and economic solutions** within a broader spectrum of global change.

If we are to maintain and enhance the natural capital of our forests, it is high time that we considered the benefits we derive from them more widely. It is crucial that we reconnect people and ecosystems.

**The content of this brochure does not claim to cover such a vast subject in its entirety. Instead, the aim is to make the main challenges and multiple benefits of the forest more accessible and more understandable.**



# CONTENTS

PAGE 5

## 01

THE FOREST  
AND ITS  
**SUPERPOWERS**

PAGE 13

## 02

**FORESTS**  
UNDER  
THREAT

PAGE 19

## 03

GOOD EVERYDAY  
HABITS TO  
**PRESERVE**  
THE FORESTS

PAGE 27

## 04

HELP **RESTORE**  
& **EXPAND**  
THE FORESTS





” Forests provide us with invaluable, often overlooked services every day...

# THE **SUPERPOWERS** OF TREES AND FORESTS

Forests are true allies for humanity. They are vital in preserving social and ecological balances and provide us with invaluable services day after day. They play a decisive role in the climate, biodiversity, economy, the protection of our soils and land, water resources, health and much more. Yet many of their benefits are often overlooked.

CO<sub>2</sub>

## FORESTS: THE NATURAL SOLUTION FOR THE CLIMATE

### The forest: a formidable ally in the fight against climate change!

Forests are our largest land-based carbon sinks<sup>2</sup> (not counting the oceans), and are our best natural solution for the climate. They are **impressive carbon pumps**, drawing in CO<sub>2</sub>, the main greenhouse gas responsible for global warming. Trees convert CO<sub>2</sub> by extracting the carbon and using it for growth, effectively storing it. Carbon can thus be stored durably in wooden items such as tables or beams, as long as the wood used comes from a sustainable managed forest.

While it is important that human society reduces its global CO<sub>2</sub> emissions, trees can also **play their part** throughout their life cycle by absorbing a significant share of the excess CO<sub>2</sub> that human activity inflicts on the atmosphere.



**Forests are one of the key solutions for the climate but only if we make efforts to reduce our greenhouse gas emissions at the same time.**



**2 bn**  
tonnes of CO<sub>2</sub>

**Forests and trees absorb the equivalent of 2 billion metric tonnes of CO<sub>2</sub> every year.<sup>1</sup>**

**The forestry and wood sector constitute a carbon sink representing**

**1/4**



**of the annual greenhouse gas emissions in France<sup>2</sup>**



**80%**

**of land-based biodiversity is found in the forest.<sup>3</sup>**



## FORESTS: A HAVEN OF BIODIVERSITY

### Forests: a haven of biodiversity

Biodiversity (or biological diversity) is the diversity of living species. It is the very basis of our life on Earth. Forest ecosystems harbour 80% of land-based biodiversity, from plants and animals small and large to fungi and bacteria, which all depend on one another for life. Most of these species cannot survive in the long term if their habitat and the inherent food chain are unduly disturbed. Our planet is facing unprecedented climate change and this biodiversity is a form of life assurance, because the greater the diversity, the more chances we have of developing some kind of resistance, resilience or adaptability.



## FORESTS: SOURCES OF FRESHWATER

The forest plays a vital role in the water cycle. Among other things, it helps cool the air and contributes to rain cloud formation, while purifying the water and retaining it in the soil. It is a vital regulating element.

### FORESTS AS RAINMAKERS!

Like us, forests breathe and transpire! Trees release water vapour into the atmosphere through a process known as evapotranspiration. As this vapour rises up, the gas gradually cools and turns into droplets. This damp air leads to rain over the forests and beyond, falling on areas which would otherwise be much drier. The rains generated by forests thus also benefit crops grown in agricultural areas.

### FORESTS AS RAINWATER COLLECTORS!

The forest ground favours the infiltration of rainwater. It is highly porous thanks to organic activity (humus, microfauna, fungi) and acts like a sponge, facilitating water absorption. In addition, the tree root system forms a special hydraulic network that facilitates water circulation within the soil. Some of this rainwater is absorbed by the trees for their requirements and the remainder filters down into the deeper layers, feeding the groundwater systems.

### FORESTS AS WATER PURIFIERS!

The water absorbed by the forest soils is filtered by a mesh-like network formed between the tree roots and fungi, along with other components, which trap certain elements such as pollutants. The water that is reabsorbed by the tree or which filters down to the groundwater systems is thus purified.



In the forest, almost **80%**

of annual rainfall is returned to the atmosphere in the form of water vapour.<sup>4</sup>



Forests provide over one third of the world's biggest cities with drinking water.<sup>5</sup>



**75%**

of the freshwater available for human use comes from the forest.<sup>6</sup>



**70%**

The trees that grow along riverbanks absorb up to 80% of the nitrates and 70% of the phosphates in the water running off towards the rivers.<sup>7</sup>



## FORESTS: PROTECTING OUR LAND

Trees are true allies in protecting our land and helping limit phenomena such as erosion, floods, high-water events and landslides.

Three phenomena made possible by trees combine to help safeguard our land and soil:

1. Rainwater is partially intercepted by the leaves and branches and thus does not reach the ground directly.
2. The highly permeable forest soil infiltrates rainwater and thus limits surface run-off.
3. The tree root system forms a framework that retains the soil.

It is also worth noting that in mountain regions, forests play a protective role by limiting damage from avalanches and rockfall. On the coast, the mangroves form natural barriers against storms and tsunamis, partially protecting people and their activities from the impact of waves. Finally, forests are formidable allies against desertification.

# 20- 50%



of rainwater is intercepted by the leaves on trees. The quantity of water captured depends on the tree species, age of the stands and their density.<sup>8</sup>



The forest soil absorbs six times more water than an equivalent area of grassland.<sup>9</sup>

**DID  
YOU  
KNOW**



**Agroforestry** is when trees or shrubs are grown around or among crops. It is an age-old practice that is now regaining ground.



## Trees: a source of natural fertilizer

Trees provide natural fertilizer as 40% of their plant mass is returned to the earth each year.<sup>10</sup>



## FORESTS: NATURAL SOIL FERTILIZERS

**Trees are natural fertilizers and boost crop yields.**

Replanting trees or hedges on farmland improves soil quality. Every year, a single tree produces hundreds of kilograms of organic matter that feeds the soil. Via its root system, it also captures filtered water and minerals from deeper layers in the soil, making them available to crops on the surface. In addition, trees minimise soil leaching (a phenomenon that depletes the soil of nutrients) and shelter pollinator insects and birds that prey on certain crop pests, thus providing biological control and more sustainable management.



## FORESTS: DRIVERS OF SOCIAL AND ECONOMIC DEVELOPMENT

Millions of people live in or around forests, which are also a social and economic driver that can help eradicate hunger and poverty, improve community resilience, foster inclusive growth and manage the planet's natural resources in a more sustainable manner.

### THE FOREST: A SOURCE OF JOBS AND ECONOMIC WEALTH

Forests provide multiple economic and social benefits by creating jobs and generating profit from the processing and sale of forest products. Timber accounts for a significant share of the GDP of dozens of tropical and Nordic countries. On a global level, an estimated 40-60 million people work in the forestry sector.<sup>11</sup> In France, 425,000 people worked in the wood sector in 2010, on a par with the automotive industry.<sup>12</sup>

### FORESTS: FOOD AND MUCH, MUCH MORE!

Forests are stocked with ingredients that increase food security for people all around the world. They are brimming with edible products (game, mushrooms, plants, fruits, roots, seeds, etc.), but that is not all! From the roots to the crown, every part of the tree has something to offer. We also use them for clothing, shelter, keeping cool or to produce energy, medication, and more! Wood is a vital resource for one person in three (2.4 billion people)<sup>13</sup> who use it to cook, mainly in developing countries.

### FORESTS: VITAL FOR SOCIAL LIFE

French people value the forest very highly, with 68% of them seeing it as an area of nature and only 16% considering it as an economic force.<sup>14</sup> Urban and suburban forests and woodlands play a role in public health and social cohesion. In addition to their health benefits, green and wooded areas in towns help combat isolation, strengthen social ties and can help reduce crime.



**60 million** people belonging to indigenous populations depend almost entirely on the forests.<sup>15</sup>



Forests enable **25%** of the world population<sup>16</sup> to meet their needs.



Every year, French people visit the forest five times more often than they go to the cinema.<sup>17</sup>



## FORESTS: ALLIES FOR THE ECOLOGICAL TRANSITION

If wood comes from sustainably managed forests, it is a formidable ally for the ecological transition.

It is much more energy-efficient than other materials and helps store carbon, even in processed products. Engineers take a keen interest in wood because it has remarkable physical properties. As such, wood is increasingly used in the construction industry and examples of wooden buildings can be seen in cities across the globe.



**A SUSTAINABLY MANAGEMENT FOREST** is a protected forest that nonetheless produces timber. It is a forest that respects and conserves its biodiversity, where the soils and water are protected, which is in good health and renews itself, and which benefits a whole society (timber resources, carbon sink, a place to walk and enjoy leisure pursuits and so on).

# 15 million m<sup>3</sup>/year

The volume of timber used in France to make products to build or renovate buildings.<sup>18</sup>



GARDIEN DE L'ÉQUILIBRE FORESTIER

Find out more: [www.pefc-france.org](http://www.pefc-france.org)



Strategically placed in urban areas, trees can reduce air temperature by 2–8°C.<sup>20</sup>



## FORESTS: ALLIES FOR HEALTH AND WELL-BEING

9 French people in 10 feel the need for daily contact with plant life. This is not surprising when we know the power that trees have on health and well-being. And trees do us good in the city too.<sup>19</sup>

### TREES: NATURAL AIR-CONDITIONERS

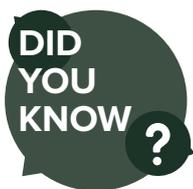
With the shade that they provide and the humidity that they generate through evapotranspiration, trees help keep temperatures cool and are extremely useful in town in a heat wave. They offer welcome shade as global warming pushes temperatures upwards, especially in urban areas.



Living near an urban green area substantially limits the risk of fatal disease, reduces the prevalence of other illnesses and increases life expectancy by seven years.<sup>21</sup>



During a day's walk in the forest, the human body produces 30% more immune cells than during a day's walk in town.<sup>22</sup>



When we go out into nature, we synchronise with it and our body relaxes. Over 20 studies conducted by researchers between 2007 and 2017 compared our physiological state alternatively in town and in the forest. Activities ranged from a walk in the woods to contemplation and meditation sessions.

Here are some of their findings:

- heart rate slows down;
- blood pressure falls;
- the immune system performs better: natural killer cells (NK lymphocytes) are more active, which increases our capacity to fight infections and tumour cells;
- parasympathetic nervous activity doubles (this is the activity that increases as we relax) while sympathetic nervous activity decreases (the activity that increases in periods of stress).<sup>26</sup>

## TREES: URBAN POLLUTION FILTERS

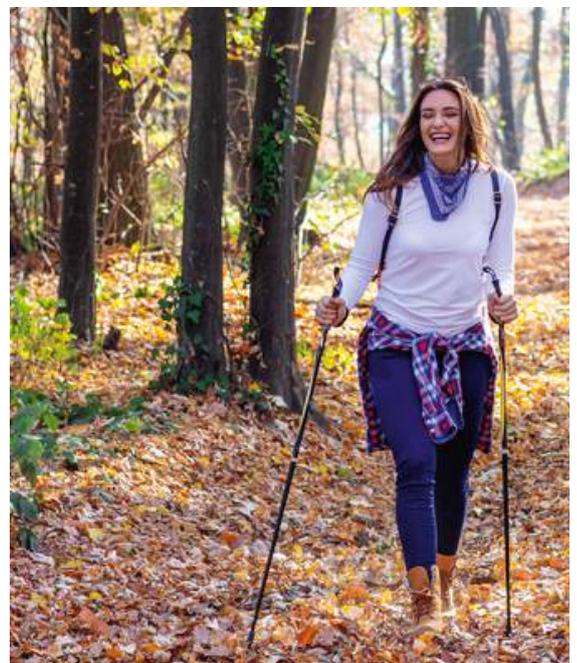
While trees cannot and must not replace other air pollution control strategies, they can significantly help purify the air. Their decontaminating power is invaluable, especially in urban environments: pollution from fine particles in the air led to the death of 3.3 million people in the world in 2016,<sup>23</sup> and causes 48,000 early deaths a year in France.<sup>24</sup>

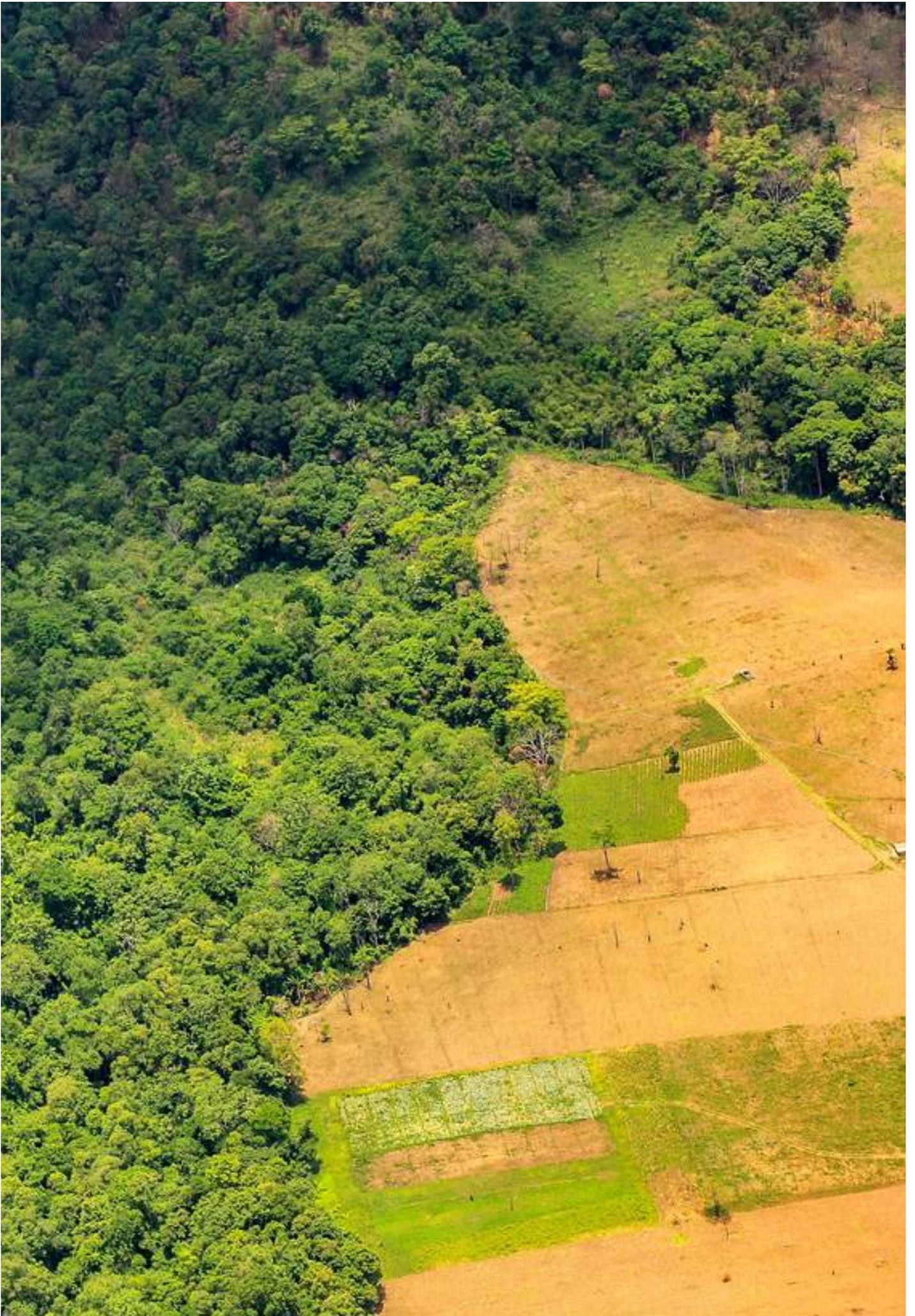
## FORESTS: OXYGEN GENERATORS

“Breathe in... and breathe out...”. Your lungs filter the air that you breathe in, supplying your body with oxygen and releasing the carbon dioxide. Trees also “breathe” and during the daytime, they do the opposite to our lungs. Through photosynthesis, their leaves capture CO<sub>2</sub> and convert it, taking the carbon (C) for the tree’s requirements and **releasing the dioxygen (O<sub>2</sub>)**, thus **purifying the air we breathe**.

## THE FOREST: A NATURAL DOCTOR

During a day's walk in the forest, **the human body produces 30% more immune cells** than during a day's walk in town. More than two days and the benefit increases to 50%. The virtues of relaxing in the forest are particularly celebrated in Japan with a practice known as silvotherapy or forest bathing, which reinvigorates mind and body and which is now gaining ground in Europe.<sup>25</sup>





”

The threat to the forests mainly comes from the pressure exerted by human activities, which influence the climate and make the forests more fragile.

# FORESTS UNDER THREAT

The forest is a common heritage and vital to humanity, yet it is under severe threat. Despite more widespread awareness, the tropical forests are still subject to intensive deforestation, largely due to our consumer habits. At the same time, forests in temperate zones are affected by an increasing range of hazards, which are directly attributable to climate change.

**THE WORLD'S FORESTS** cover 3.9 million hectares, i.e. around one third of the planet's land surface if we don't count Antarctica and Greenland. That might seem a lot but **it is only half of the forest cover there was when man starting farming 11,000 years ago.**<sup>27</sup>

The world's forests face two main types of threat: **forest degradation** and **deforestation**. Both contribute to climate change because they reduce the surface area and quality of existing carbon sinks.



# DEFORESTATION

**Deforestation is the loss of forest area to make way for other land uses, or a significant loss of forest cover. Between 1990 and 2015, over 240 million hectares were subject to deforestation.**

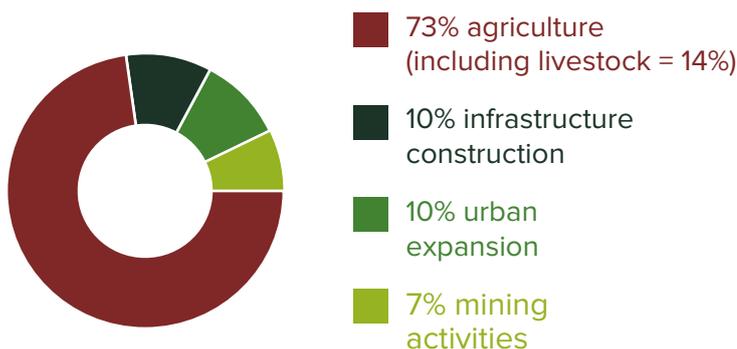
Farming is by far the largest driver of deforestation. **More than half of deforestation in the world is directly linked to forests being converted for pasture or crops.** Distinction should be made between commercial and industrial crop and livestock production (40%) and local peasant subsistence farming, mainly in developing countries (33%). Livestock farming alone accounts for 14% of deforestation attributable to commercial farming.

## THE MAIN THREATS TO FORESTS AND HOW THEY WORK



## THE CAUSES OF DEFORESTATION

Analysis of 46 tropical and subtropical countries.



Source: FAO "The State of the World's Forests", 2016



**!** **Deforestation** affects local inhabitants, ecosystems, species and releases greenhouse gases.

## TROPICAL FORESTS

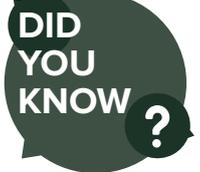
The tropical forests are the world's largest and richest forested area. While they are not the only forests under threat, they are the most severely affected by deforestation.

The main regions in the world to suffer from deforestation are South-East Asia, Central and South America, and Africa.<sup>30</sup>



Tropical forests

**45%**  
of the world's forests.<sup>29</sup>



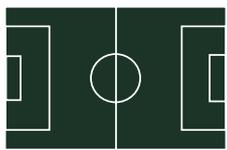
**TROPICAL FORESTS PROVIDE US WITH IRREPLACEABLE SERVICES, WITHOUT WHICH LIFE ON EARTH WOULD BE IMPOSSIBLE.**

With their surface area, vigour and density, the tropical forests play a major role in carbon sequestration. However, that role is now under severe threat. The reason? Deforestation which compounds the issue by triggering a direct increase in CO<sub>2</sub> emissions. Furthermore, 50% of land-based biodiversity is found in the tropical forests<sup>32</sup> and deforestation is one of the main causes of global biodiversity loss.



**12M ha**

The total tropical forest area destroyed in 2018<sup>31</sup>

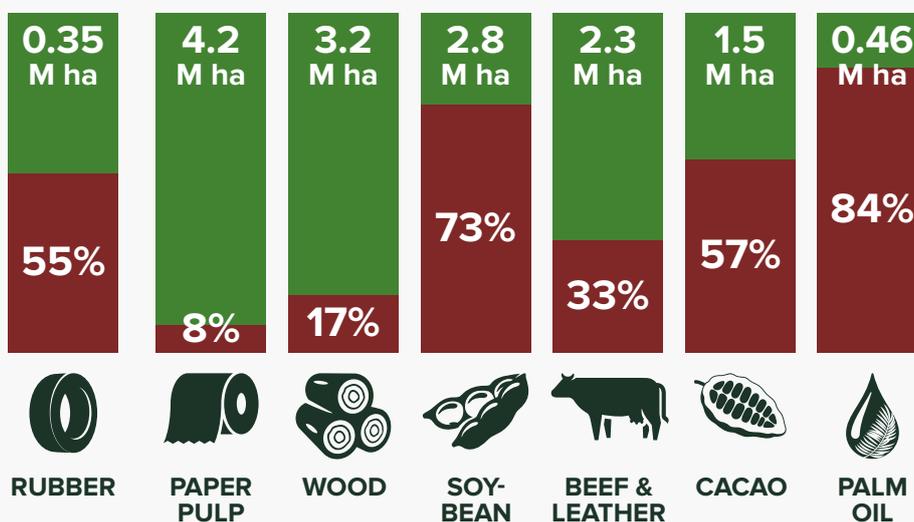


**30/Min.**

football pitches per minute

### ANNUAL FRENCH IMPORTS

The surface areas required to produce the raw materials imported by France and the related deforestation risks



14.8 million hectares, including

**5.1 M ha**

in countries with a high deforestation risk.

**Total surface areas required for production imported by France.**

**Proportion of the surface areas at risk (areas situated in countries with a high deforestation risk with ecological and human impacts).**

Source: WWF France - 2018 report: Déforestation importée, Arrêtons de scier la branche. (Summarising the report, "Risky Business: The risk of corruption and forest loss in France's imports of commodities")

# FOREST DEGRADATION

In both tropical and temperate zones, forests face another threat – degradation. This reduces the forest’s capacity to provide goods and services, such as CO<sub>2</sub> sequestration, biodiversity protection, timber production and so on.

The cause is the selective felling of trees in tropical forests in areas such as the Amazon, overgrazing and felling for firewood, global warming and other natural hazards such as insect attacks and diseases. These phenomena, which can occur simultaneously, can affect the uses and socioeconomic benefits of forests.

## CLIMATE HAZARDS: DROUGHT, STORMS, AND SO ON

In France, one of the main threats is drought. In forest soils, drought is the primary factor affecting tree growth.<sup>34</sup> It also incurs a risk of greater tree mortality and a higher fire risk. Météo France predicts an increase in the frequency and average intensity of droughts in France by 2100.<sup>35</sup> Rising temperatures and summer droughts, especially the most extreme episodes, will aggravate the fire risk in areas where it is already a concern<sup>36</sup> and extend it to all areas of mainland France by 2050.<sup>37</sup> Storms are also a risk factor for the French forests. A net increase in the frequency of storms moving through Europe has been recorded in the last few years.<sup>35</sup> Future projections point to a rise in storms from American tropical cyclones affecting Western Europe over the course of our century.<sup>36</sup>



# +40%

of tree species in Europe are threatened with extinction.<sup>33</sup>

DID YOU KNOW ?

The damage caused by the storms in 1999 alone destroyed a third of the annual CO<sub>2</sub> stored by the forests in Europe.<sup>35</sup>

California has experienced unprecedented drought and seen 102 million trees disappear since 2010, 62 million of which were lost in 2016 alone.<sup>35</sup>



Storm damage to forests could double in Europe by 2100.

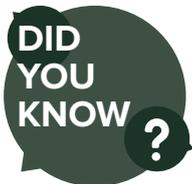


## NATURAL HAZARDS: INSECTS AND DISEASES

The health of forests in temperate zones is also negatively affected by **diseases and exotic insects** imported with globalisation. These pathogenic fungi and insect pests account for most of the damage recorded in French forests and drive a reduction in the ecosystem services provided, such as quality timber production. It should be noted that climate change contributes to an increase in insect populations.<sup>35</sup> At the same time, storms, drought and increasing temperatures weaken the trees, making them more vulnerable to insect pests. For example, storms Martin and Klaus in 1999 and 2009 respectively, came with an eruption of bark beetles, causing a 10% rise in tree mortality.<sup>35</sup>



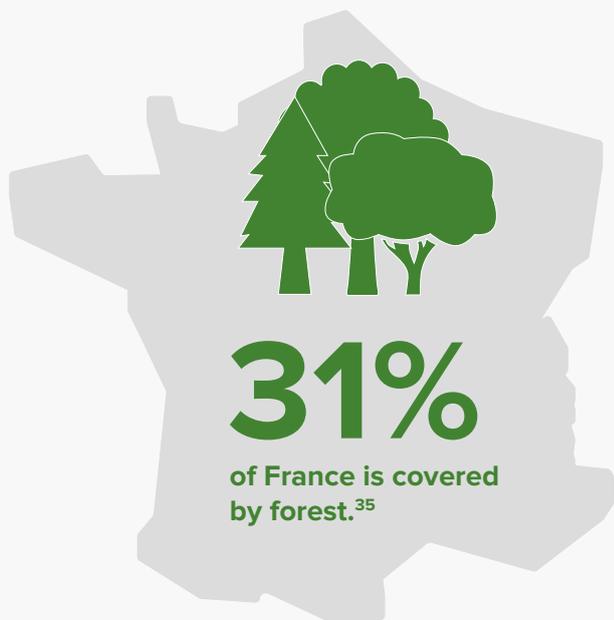
**20% of French forests are affected by hazards every year.<sup>35</sup>**



Species diversity makes the forest more resistant to climatic and natural disruptions and can therefore help the forest adapt to the future climate.

## THE FRENCH FORESTS

The forest covers 17 million hectares or 31% of France's mainland territory, making it the fourth most wooded country in Europe.<sup>35</sup>



**CO<sub>2</sub>** The country's **#1**  
carbon sink<sup>35</sup>



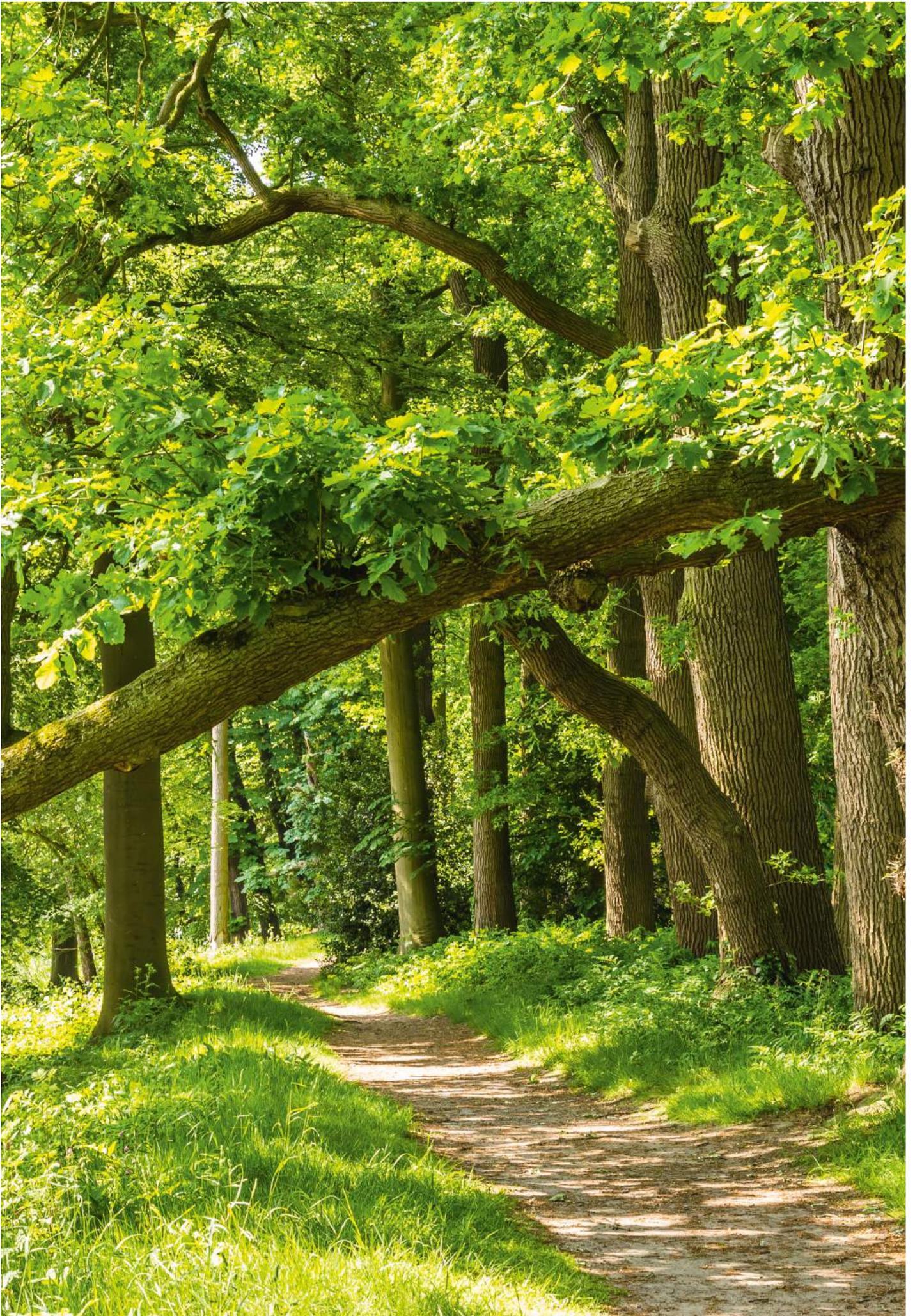
**8 million**  
In 2015, 8 million trees planted died because of the drought.<sup>35</sup>



**50%**  
of the forest will be exposed to a high risk of fire by 2050. France could experience high temperature peaks of 50°C by 2100.<sup>35</sup>



**500**  
The French forest is home to 300 insect pest species and 200 fungal pathogens.<sup>35</sup>





If we all change a little, we can change everything!

# GOOD EVERYDAY HABITS TO **PRESERVE** THE FORESTS

To meet our food requirements and sustain our lifestyles, France imports agricultural and forestry commodities grown from other countries. Seven of these imported commodities (soybean, palm oil, cacao, beef, paper pulp, timber and rubber) account for almost 15 million hectares of farmland, one third of which is located in countries with a high deforestation risk.<sup>38</sup>

Demand linked to our consumer habits forces agricultural holdings beyond our borders to expand further and further, which can lead to deforestation. But this is not inevitable! We can all do our bit every day. Taking action to protect the forests means being more attentive to what we buy, consuming less but better, and focusing on production methods that do not result in deforestation.

What if it was simply a matter of looking at the trees and (re)connecting with them? **We need nature** to slow down, to reconnect with what really matters and to learn to be more mindful. Being mindful of what it brings us and restoring it to its rightful place too.



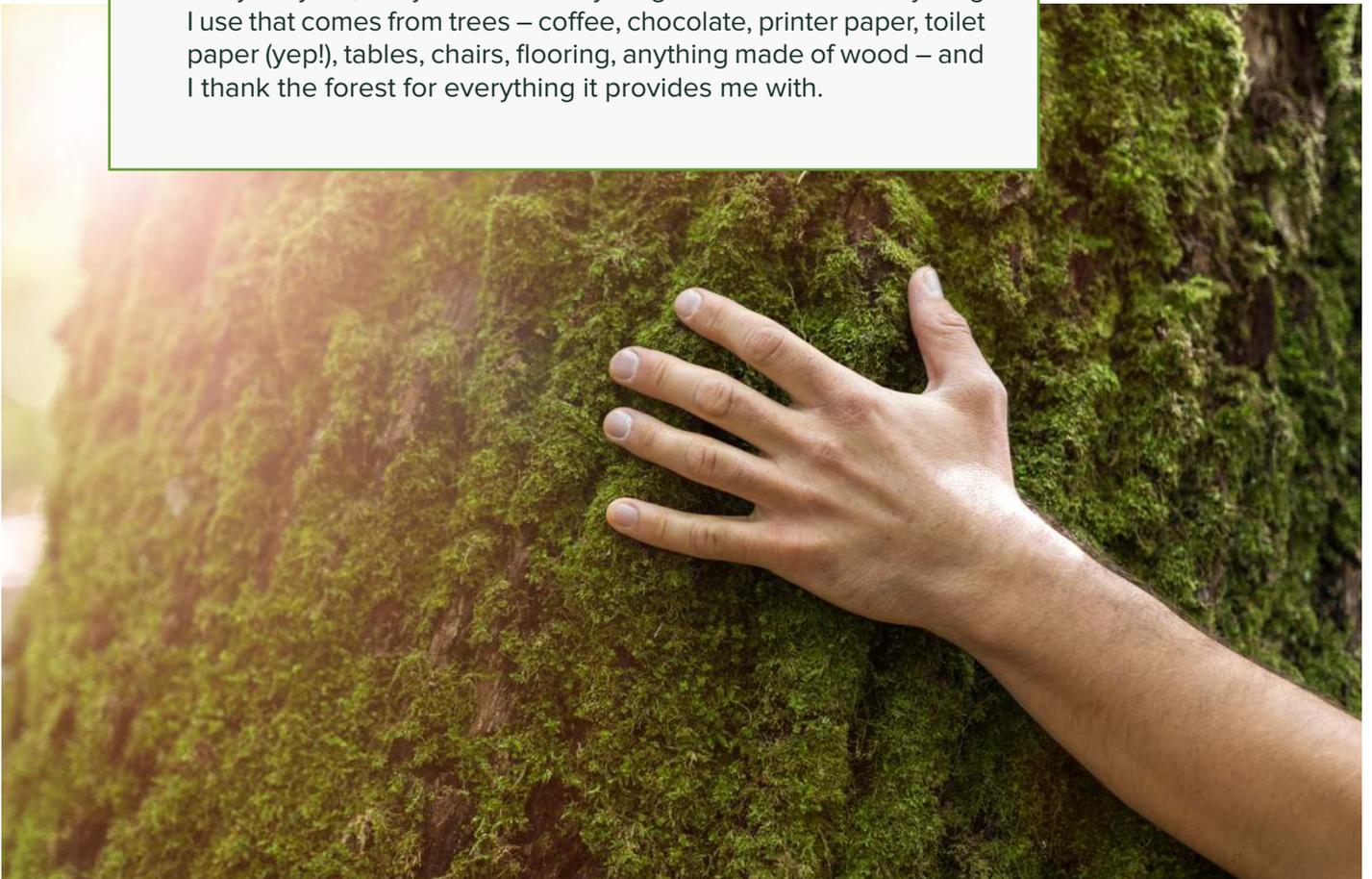
THE ESSENTIAL...

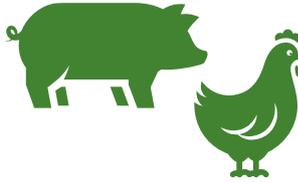
## A VITAL RECONNECTION WITH THE TREES



### WHAT THIS MEANS FROM DAY TO DAY...

- > Whenever possible, I walk in the forest for a couple of hours, or even better, I spend a weekend there. Visiting the forest is all about slowing down. About taking time to (re)connect to what really matters.
- > And if I can't get out to the forest, I take the time to visit a park and relax among the trees, on a regular basis.
- > Wherever I am, I'm attentive to the trees around me and I observe them. I awaken my five senses: are those conifers or deciduous trees? Can I hear the sound of the wind in their leaves or the birds in their branches? What do I feel when I touch their trunks? Is the bark soft or rough?
- > In my daily life, I stay aware of everything around me and everything I use that comes from trees – coffee, chocolate, printer paper, toilet paper (yep!), tables, chairs, flooring, anything made of wood – and I thank the forest for everything it provides me with.





I EAT LESS  
BUT BETTER  
PORK AND POULTRY!

We are all free to be vegetarian, vegan or meat-eaters! What matters is that we are aware of the environmental impact and that we adapt our consumption as best we can.

**WHAT THIS MEANS FROM DAY TO DAY**

- > I eat less pork and poultry and I avoid industrial products as far as possible.
- > When I eat meat, I enjoy it more, with good quality, labelled products from local sources.
- > I try out some great recipes using plant proteins (French organic soybean, lentils, beans, etc.) to try and diversify my diet.

**RECOMMENDED LABELS INCLUDE:**

Élevé en France et En Plein Air (reared in France in the open air), Fermier (farm-grown), Bio (organic) or Label Rouge (marked élevé en liberté or en plein air - free range or reared in the open air). You can also look for Porc sur paille (raised on straw).



**SOYBEAN & DEFORESTATION<sup>39</sup>**



\* Brazil, Argentina.

Farmed pork and poultry are mainly fed on soybean. However, soybean production is one of the main causes of deforestation in the Amazon and it is almost exclusively destined for animal feed in intensive farming. Thus, whenever we eat products such as pork, poultry and eggs, we are indirectly consuming soybean. Even when we buy French produce, it can still be an indirect driver of deforestation.





**I EAT BEEF LESS OFTEN BUT I CHOOSE BETTER QUALITY!**

**WHAT THIS MEANS FROM DAY TO DAY...**

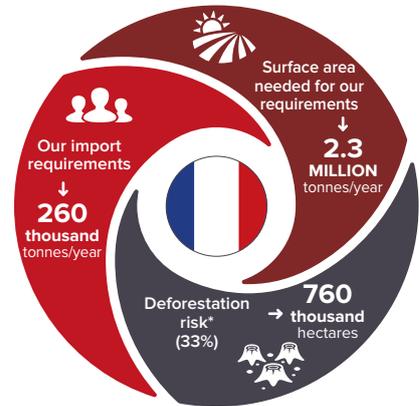
- > I eat beef less often.
- > I try not to eat too much industrial meat and meat-based ready meals (hamburgers, lasagne, etc.).
- > I select meat with a quality label from a local source.

**RECOMMENDED LABELS INCLUDE:**

It is not always easy to know if we're buying quality meat. Preferably opt for meat breeds (e.g. Charolais, Limousin, etc.), or on the labels look for the word "organic", "grass-fed", or "GMO free". You can also look for these labels:



**CATTLE BREEDING & DEFORESTATION<sup>39</sup>**



\* China, Brazil, Indonesia.

Generally speaking, worldwide, cattle are bred in a way that applies excessive pressure on the environment and eats into forest land. This is particularly true in the Amazon where vast swathes of the forest are felled to make way for cattle farms.

**LEATHER & DEFORESTATION**

Almost 65% of leather used in the world is of bovine origin. Beef and leather share the same production systems, with hides accounting for around 10% of the slaughtered livestock's value. It makes a relatively small but useful contribution to the overall profitability of the cattle sector. It is therefore important that you consult the manufacturer to find out where the hides used come from.

**In France, our import requirements amount to 100,000 metric tonnes of leather a year, mainly for processed items such as shoes, bags, gloves and the like.<sup>39</sup>**



**I MAKE LIMITED AND RESPONSIBLE USE OF LEATHER**

**WHAT THIS MEANS FROM DAY TO DAY...**

- > Whatever kind of leather item I fancy, I ask myself whether I really need it or if I just want to treat myself.
- > I check where the leather comes from. I opt for sustainable leather from a responsible source.
- > I take part in the circular economy by opting for second-hand goods whenever possible.

#### ECO-HABIT #4



## I AVOID PALM OIL IN MY GROCERIES!

### WHAT THIS MEANS FROM DAY TO DAY...

- > I cut down my consumption of industrial and processed foods.
- > I learn how to read food labels, starting with the items I consume regularly.
- > If necessary, I can look for more responsible palm oil (e.g. RSPO certification) and use apps for help (e.g. the OPEN FOOD FACT app).
- > If you really can't do without chocolate spread, choose a brand without palm oil or make it yourself – there's nothing tastier!

### RECOMMENDED LABELS INCLUDE:



**LOOK FOR PALM OIL ON THE PACKAGING:** In food products => palm oil, palm fruit oil, palm kernel oil, palm fat, palm olein, palm stearin. In non-food products => look for these prefixes: PALM-STEAR- LAURYL.

## PALM OIL & DEFORESTATION<sup>39</sup>



\* Indonesia, Malaysia, Colombia, Honduras, Guatemala.

Palm oil plantations cover a total 27 million hectares<sup>39</sup> across the world, leading to forced evictions of local inhabitants, deforestation and species extinction. And for good reason! The oil palm is the most productive oil crop per hectare. The oil is highly versatile. **It is found in almost 50% of processed goods in our supermarkets (biscuits, chocolate, ice cream, margarine, soap, shampoo, ready-cooked dishes, etc.).** There's only one way to find out if a product contains it: learn how to read the labels!

#### ECO-HABIT #5



## I TAKE THE TRAIN, MY BICYCLE OR OPT FOR CAR-SHARING TO CUT MY FUEL CONSUMPTION!

### WHAT THIS MEANS FROM DAY TO DAY...

- > I cut down on car journeys to reduce my fuel consumption.
- > I opt for car-sharing, public transport, cycling or walking for short journeys.

## PALM OIL & BIOFUELS<sup>39</sup>

Oil palm is not only destined for the food industry. In fact, it is mainly used to produce biofuels. **A growing share of the harvests finish in our car fuel tanks.**



# I EAT FEWER PROCESSED CHOCOLATE ITEMS!

## WHAT THIS MEANS FROM DAY TO DAY...

- > I cut down on industrial (processed) chocolate such as confectionery bars.
- > I treat myself to good quality, “responsible” chocolate with a preference for certified organic cocoa from fair trade sources which promotes fair payment for producers and encourages them to keep their land and apply better practices.

### RECOMMENDED LABELS INCLUDE:



### SOME ONLINE READING:

(in French) the France Nature Environnement article: [quelles marques de chocolat s’engagent contre la déforestation ?](#)

## CACAO & DEFORESTATION<sup>39</sup>

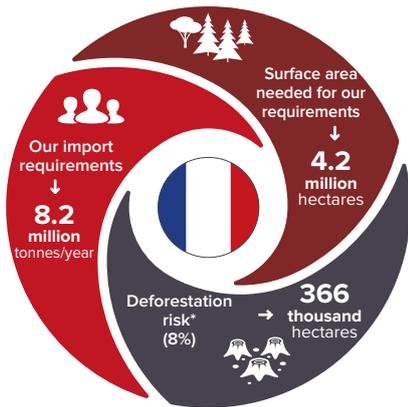


\* Côte d’Ivoire, Cameroon, Nigeria, Ecuador, Indonesia, Peru.

Chocolate is made from cacao beans from the cacao tree. These small trees grow in tropical environments, especially West Africa which provides three quarters of the world’s cacao. To meet growing demand for chocolate, tropical forests are felled to make way for cacao trees. This rising demand favours intensive, uncontrolled cacao cultivation, the leading cause of deforestation in West Africa.<sup>40</sup> Deforestation jeopardises numerous species such as the much-loved elephant: it is the second leading cause of the species’ demise after poaching. It should also be noted that millions of children are exploited on cacao plantations.



## PAPER PULP & DEFORESTATION<sup>39</sup>



\* Brazil and China.

Toilet paper, paper towels, exercise books, books, printer paper and packaging! Paper is a simple product and it is everywhere! From renewable sources, it can be an excellent eco-friendly material, as long as it is produced in a sustainable manner. Where there's paper, there's paper pulp which comes straight from trees. i.e. the forest. Like wheat, maize and soybean, paper pulp is a globalised commodity. It is shipped all over the world and paper makers import it from many different countries. A product marked "Made in France" does not necessarily guarantee that the paper pulp is French.

ECO-HABIT #7



## I BUY CERTIFIED AND RECYCLED PAPER

### WHAT THIS MEANS FROM DAY TO DAY...

- > I try not to use paper unnecessarily (e.g. printing)
- > I sort paper for recycling (paper can be recycled five times and only 50% of paper is currently recycled in France).
- > When buying paper or cardboard, I select labels that certify recycled fibres or fibres from sustainably managed forests (FSC / PEFC).
- > I limit packaging as far as possible.

### RECOMMENDED LABELS INCLUDE:



GARDIEN DE L'ÉQUILIBRE FORESTIER



ECO-HABIT #8



## I CHECK THE ORIGIN OF THE WOOD IN THE PRODUCTS I BUY

### WHAT THIS MEANS FROM DAY TO DAY...

- > I buy certified wood products from local sources wherever possible.
- > I reduce my consumption of single-use products that are hard to recycle or reuse (such as tooth picks or wooden chopsticks).
- > I recycle wooden items and furniture I no longer use.

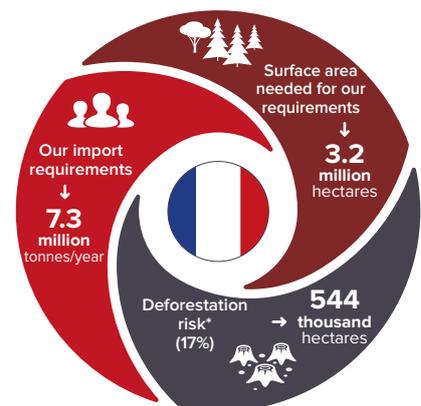
### RECOMMENDED LABELS INCLUDE:



GARDIEN DE L'ÉQUILIBRE FORESTIER

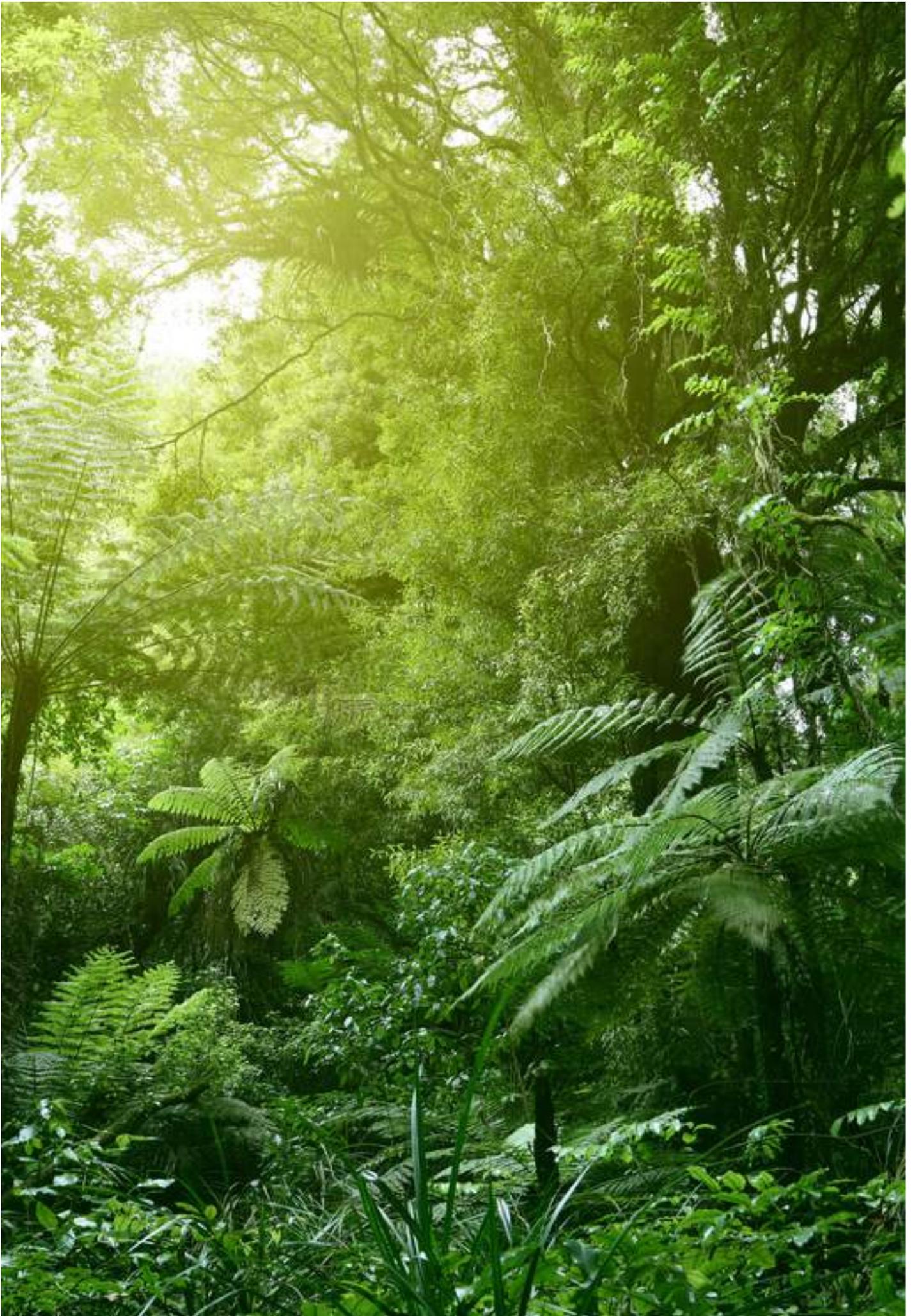


## WOOD PRODUCTION & DEFORESTATION<sup>39</sup>



\* 17% China and Russia + 5% tropical countries.

When timber is produced responsibly and from sustainably managed forests, wood is good choice of material. It is renewable, biodegradable, has remarkable physical properties and stores CO<sub>2</sub>. However, you should be aware of illegal wood production that is unfortunately still very frequent on an international scale. You must therefore choose certified wood.





Could planting a forest become a regular contribution for all of us?

# HELP RESTORE & EXPAND THE FORESTS

It is important that we change our habits to protect our forests, and it is just as crucial that we restore and expand them.

Taking part in reforestation projects is a way of addressing the big global issues that will shape the future of humanity: climate change and biodiversity loss. Forests are the solution as long as we make a personal effort to reduce our own carbon footprint at the same time, and we manage reforestation projects to achieve sustainability, resilience and adaptability in the face of climate change. Taking action to protect the forest thus develops carbon sinks for the future and increases biodiversity – but that’s not all!

The forest is much more than that. It also plays an economic and social role affecting jobs, health, our leisure pursuits and more.

## TAKE ACTION NOW

Trees take time to grow and reach the maturity at which they absorb maximum CO<sub>2</sub> and render an array of services such as oxygen production, water filtering and soil retention.

Given this time frame, we need to take action now by:

- > **Protecting our forest and planting new ones.**
- > **Restoring degraded plots** in a way that makes them more resilient to climate change.
- > **Focusing on the natural regeneration** of current stands to fortify them.

Reforestation projects also have an immediate impact on social and economic factors (education, employment, food security, health, etc. ).



of additional forest area

The IPCC\* estimates that among all the measures designed to limit global warming to 1.5°C at the end of this century, an increase of 10 million km<sup>2</sup> of forest area is needed before 2050.<sup>41</sup> **This goal can be reached if it is done with an eye to sustainability and resilience so that the forests can adapt to climate change.**



## MAKE THE MOST OF THE FOREST'S MULTIFUNCTIONAL POWERS!

The key is restoring forest ecosystems so that they can fulfil their multifunctional role to benefit the environment, society and the economy.

- > **Environmental function:** CO<sub>2</sub> storage, biodiversity preservation, soil protection and protection against natural hazards
- > **Economic function:** jobs, timber production, a food source, etc.
- > **Social function:** a habitat, a source of health and well-being, recreation, etc.

Each forestry project should take these different aspects on-board.

And in this respect, **forest diversity**, i.e. the diversity of tree species in the forest stand, is key.

The benefits include greater resilience in the face of climate disruption and the development of ecosystem services.



**Reforestation is essential but it will never compensate for the efforts we all need to make to cut our CO<sub>2</sub> emissions—starting today.**



# DIFFERENT KINDS OF REFORESTATION PROJECTS



## PROJECTS IN FOREST ENVIRONMENTS

**OBJECTIVE:** planting varied species adapted to the local ecosystem or encouraging natural regeneration to enhance and restore the multifunctional forest.

These projects in the forest environment seek to restore plots affected by natural hazards, address deforestation and encourage forest biodiversity. They reinforce the forests and make them more resilient to climate change, while supporting jobs in the sector through sustainable forest management.



## PROJECTS IN URBAN ENVIRONMENTS

**OBJECTIVE:** planting urban forests to help develop greener, more sustainable and more attractive cities

Strategically placed urban trees help lower the concentration of the fine particles emitted by building heating systems and vehicles. As they produce humidity and provide shade, they can also serve as natural air conditioners, cooling the city air by 2-8°C.



## PROJECTS IN AGRICULTURAL ENVIRONMENTS

**OBJECTIVE:** developing agroforestry by planting trees and bushes on agricultural land.

This system increases biodiversity, protects and improves soil quality, and enhances CO<sub>2</sub> storage. In tropical zones, it also helps diversify agricultural production and thus promotes the diversification of farmers' incomes.



Many stakeholders are involved in restoring the forest around the world: forest managers and associations in France and Europe, indigenous communities in the intertropical zone and their NGO partners, and organisations that fund projects and do outreach work, such as Reforest'Action. They all work together, in their own specific manner, to rehabilitate forest ecosystems.



## TO SUPPORT REFORESTATION PROJECTS:

### As a citizen, you can:

- > Join local associations working in your region to take part in winter tree planting sessions for hedgerows or the forest.
- > Get involved in participatory planting operations (Reforest'Action organises several each year, mainly in March which is the Month of the Forest).
- > Planting and offering trees online by using search engines such as Ecosia or a reforestation platform such as Reforest'Action where you can follow the project's progress over the long term.

### As a company, you can:

- > Provide financial backing for reforestation projects run by a well-reputed organisation, while reducing your carbon footprint and communicating honestly on your commitment;
- > Mobilise your staff by calling on professionals to help you organise team-building events in the forest, for example to rewood a section of a local forest affected by a natural hazard.



## TO MAKE SURE YOU SELECT THE RIGHT REFORESTATION PROJECT, CHECK:

- > the quality of the organisation in charge, and of its local partners
- > the diversity of species planted or regenerated
- > the information available on how funds are used
- > what follow-up and reporting is available to keep track of projects over the long term



# BIBLIOGRAPHY

1. The State of the World's Forests (SOFO) - FAO - 2018  
<http://www.fao.org/3/I9535EN/I9535en.pdf>
2. Office National des Forêts - Les forêts, de gigantesques puits de carbone  
[http://www1.onf.fr/gestion\\_durable/++oid++5ae6/@@display\\_advise.html](http://www1.onf.fr/gestion_durable/++oid++5ae6/@@display_advise.html)
3. Notre avenir s'appelle forêt - Reforest'Action, 97p. - 2018
4. Office National des Forêts – Eau et forêt, une association naturelle  
[http://www1.onf.fr/gestion\\_durable/++oid++91e/@@display\\_advise.html](http://www1.onf.fr/gestion_durable/++oid++91e/@@display_advise.html)
5. Source: FAO: The State of the World's Forests - Forest pathways to sustainable development, 2018, 138p
6. FAO, Advancing the forest and water nexus, 2019, 140 p
7. FNE – Reconquête de la qualité de l'eau  
[https://ged.fne.asso.fr/silverpeas/LinkFile/Key/65f6d3d7-7ffb-45b5-b682-a029872aeb10/fne\\_lde\\_reconquete-qualite-de-l-eau.pdf](https://ged.fne.asso.fr/silverpeas/LinkFile/Key/65f6d3d7-7ffb-45b5-b682-a029872aeb10/fne_lde_reconquete-qualite-de-l-eau.pdf)
8. Office National des Forêts – Eau et forêt, une association naturelle  
[http://www1.onf.fr/gestion\\_durable/++oid++91e/@@display\\_advise.html](http://www1.onf.fr/gestion_durable/++oid++91e/@@display_advise.html)
9. Office National des Forêts, la forêt et l'eau, un équilibre savant -  
[http://www1.onf.fr/gestion\\_durable/++oid++5ae7/@@display\\_advise.html](http://www1.onf.fr/gestion_durable/++oid++5ae7/@@display_advise.html)
10. Association Française de l'Agroforesterie. <https://www.agroforesterie.fr/definition-agroforesterie.php>
11. FAO, The State of the World's Forests, 2018, 158 p
12. Ministère de l'Agriculture et de l'Alimentation – 2016 <https://agriculture.gouv.fr/la-filiere-foret-bois-une-filiere-tournee-vers-lavenir>
13. FAO, Towards food security and improved nutrition: increasing the contribution of forests and trees, 2013, 16 p
14. Notre avenir s'appelle forêt - Reforest'Action, 97p. - 2018
15. <http://www.fao.org/forestry/27365@69266/en/>
16. WWF, Why Forests are Important - <https://explore.panda.org/forests>
17. Notre avenir s'appelle forêt - Reforest'Action, 97p. - 2018
18. ADEME <https://www.ademe.fr/expertises/batiment/passer-a-laction/elements-construction/dossier/parois-opaques/bois-construction> 2015.
19. Notre avenir s'appelle forêt - Reforest'Action, 97p. - 2018
20. FAO, Infographic - Benefits of Urban Trees, 2016
21. Kardan O. et al., Neighborhood greenspace and health in a large urban center, *Scientific Reports* 5:11610, 2015.
22. Clemens G.A, L'effet guérisseur de l'arbre, les bénéfices émotionnel, cognitif et physique de la biophilie, *Le Courrier du livre*, 2016, 224 p
23. Lelieveld J. et al., The contribution of outdoor air pollution sources to premature mortality on a global scale, *Nature* 17 September 2015, volume 525.
24. Santé Publique France, Impacts de l'exposition chronique aux particules fines sur la mortalité en France continentale et analyse des gains en santé de plusieurs scénarios de réduction de la pollution atmosphérique, June 2016, 162 p
25. Clemens G.A, L'effet guérisseur de l'arbre, les bénéfices émotionnel, cognitif et physique de la biophilie, *Le Courrier du livre*, 2016, 224 p
26. You can find details on all these experiments and their conclusions in the book by Pr Yoshifumi Miyazaki: *Shinrin Yoku – Shinrin Yoku: The Japanese Art of Forest Bathing*, Timber Press, 12 June 2018, pp. 127-173.
27. (FAO, 2000; Matthews et al., 2000). Global Forest Watch <https://www.globalforestwatch.org>
28. Office National des Forêts - Les forêts, de gigantesques puits de carbone  
[http://www1.onf.fr/gestion\\_durable/++oid++5ae6/@@display\\_advise.html](http://www1.onf.fr/gestion_durable/++oid++5ae6/@@display_advise.html)
29. Rodney J.K. et al., Dynamics of global forest area: Results from the FAO Global Forest Resources Assessment 2015, *Forest Ecology and Management* 352 (2015) 9–20 0
30. FAO: The State of the World's Forests - 2016 - 36 p
31. Global Forest Watch
32. Nature Conservancy: <https://www.livescience.com/63196-rainforest-facts.html>
33. International Union for the Conservation of Nature (IUCN) - [https://www.lemonde.fr/planete/article/2019/09/27/plus-de-40-des-especes-d-arbres-presentes-en-europe-menacees-d-extinction\\_6013312\\_3244.html](https://www.lemonde.fr/planete/article/2019/09/27/plus-de-40-des-especes-d-arbres-presentes-en-europe-menacees-d-extinction_6013312_3244.html).
34. Notre avenir s'appelle forêt - Reforest'Action, 97p. - 2018
35. Vidal J.P. et al., (2012), Evolution of Spatio-Temporal Drought Characteristics: Validation, Projections and Effect of Adaptation Scenarios, *Hydrology & Earth System Sciences*, 16, pp. 2935-2955.
36. Académie d'agriculture de France, La forêt et le bois en France en 100 questions, ouvrage collectif sous la coordination d'Yves Birot, accessible en ligne : <http://academie-agriculture.fr/publications>.
37. Charty C. et al. Changement climatique et extension des zones sensibles aux feux de forêts, rapport de mission interministérielle, 2010, 190 p.
38. WWF2018 – Report: Déforestation Importée, arrêtons de scier la branche (summary of the report “Risky Business: The risk of corruption and forest loss in France's imports of commodities”). This source is 39 and the last one 42
39. Futura Sciences - <https://www.futura-sciences.com/planete/actualites/foret-palmiers-huile-nains-limiter-deforestation-75388/>
40. France Nature Environnement - <https://www.fne.asso.fr/dossiers/deforestation-afrique-cacao>
41. IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, Summary for policymakers, October 2018, 34 p



## CONTACT

[contact@reforestaction.com](mailto:contact@reforestaction.com)

+33 (0)1 86 22 04 80

[www.reforestaction.com](http://www.reforestaction.com)

