

## ACTIVITIES OF THE FOUNDATION

Dear all,

We hope that your 2022 has started well, and that the New Year will be easier for all of you who are hard at work around the world to turn the tide of extinction that is impacting trees and all living organisms.

Most of the projects we support have experienced difficulties, resulting in delays in implementation whilst threats are getting worse. A few projects seem to be in jeopardy, especially in conflict areas. However, the vast majority of our beneficiaries are still working hard. Thank you all for your perseverance!

In 2021, the Foundation passed the milestone of 100 active projects. Our fourth call for projects, like previous ones, was a great success. This will allow us to keep momentum going before undoubtedly starting a consolidation phase in certain countries where we would like to see more collaboration between projects and a greater impact.

With almost a third of the world's trees threatened with extinction, there is no time for resignation if we are to achieve our goal of zero extinction. Building upon the many successes this year and the interest in tree planting, we can collectively increase our impact by getting all the world's tree 'planters' to adapt their practices and plant the right species in the right places.

Yours sincerely,

Jean-Christophe Vié

Director General

### Call for proposals

Projects submitted in response to the Foundation's fourth call for proposals are currently being reviewed. We received nearly 100 project proposals targeting a total of 294 threatened tree species (44 CR, 115 EN, 135 VU) in 54 countries. The most represented continent was Africa with 46 projects, followed by South America with 18 projects, and Asia with 17 proposals. The countries that submitted the most projects were Ghana (7), Mexico (6), and Colombia (5). We would like to thank all the organizations that took the time to submit a proposal.

A meeting of the Expert Committee is planned for mid-February to make a selection. Recommendations will be made to the Board, who will make a decision in mid-March. Project applicants will therefore be informed of the outcome in the second half of March.

### Overview of projects

Since the Foundation set up a Secretariat and decided to publish calls for projects at the beginning of 2018, around 100 projects have been funded. The list and descriptions are available on our website. The field projects target 735 threatened species (213 Critically Endangered, 253 Endangered and 269 Vulnerable). The Foundation mainly supports projects in Latin America / Caribbean (30) and Africa (28). The countries with the most projects are Madagascar (8), Colombia (6), and Brazil (4). The majority of projects consist of direct actions at the species level (56% of the activities), followed by the improvement of framework conditions (37%) and finally threat reduction (7%).

### Impact of covid

Many projects have been impacted by the health situation, causing delays in implementation. The most frequently reported impacts are: inability to travel to the field (especially to collect seeds), and increased threats or team members directly infected by the virus. We have tried to adapt as best we can, and have granted many extensions to projects; the situation seems to be gradually returning to normal.

### World Conservation Congress (September 3-11, 2021):

The Foundation was represented at the Congress by the Secretariat team and members of its Board. In addition to participating in various sessions, the Congress was an opportunity to meet a good number of partners who managed to make the trip despite health conditions and restrictions. The Foundation also played an active role in the preparation of an emergency motion, endorsed by 28 IUCN member organizations and its Species Survival Commission, calling for tree species diversity to be taken into account and for threatened species to be included in tree plantations. Unfortunately, the IUCN did not consider the issue to be sufficiently urgent or new despite all the arguments provided, and rejected the motion.



Meeting with representatives of Dominican Republic including Grupo Jaragua, which preserves threatened trees in the country.

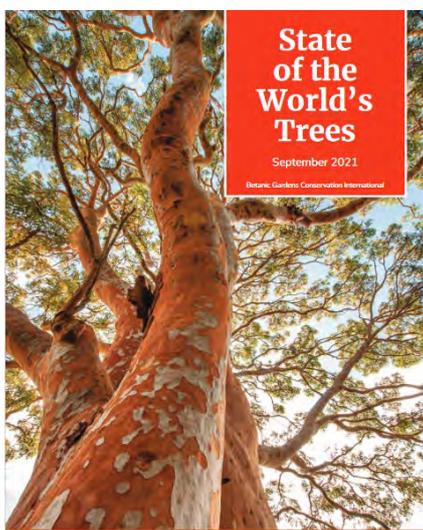
### **Change in the team**

Céline Bartolomucci has informed us of her wish to take up a new professional challenge and it is with regret that we have taken note of her departure in March. Céline joined the Foundation's Secretariat in 2018 and has accompanied its recent development with great professionalism. She has been the point of contact for most of our beneficiaries and has successfully managed a range of tasks that are absolutely essential to the smooth running of the Foundation, whilst obtaining a Master's degree with flying colours. We wish her every success! We have launched a recruitment process in the hope of finding a successor soon.

## NEWS FROM THE PROJECTS

### **Assessment of the world's trees**

**GTSG BGCi**



One of the highlights of 2021 was the publication of the State of the World's Trees report. This was the first landmark publication on the roadmap towards assessing all 60'000 species of trees and including them on the IUCN Red List of Threatened Species. Once completed, this project, supported by our foundation for a number of years, will allow us to better guide conservation strategies. Thanks to the hard work of many individuals and organizations coordinated by Botanic Gardens Conservation International (BGCI) and the IUCN/SSC Global Tree Specialist Group, 30% (17,500) of tree species are now documented as being at risk of extinction, with over 440 trees with fewer than 50 individuals remaining in the wild. You can access the report [here](#).

In addition to publishing the report, BGCI also developed the Global tree portal ([Global Tree Portal](#)), an online database which allows access to important statistics on threatened trees at both global and country levels, species searches, and the tracking of conservation efforts.



As part of the Global Trees Campaign, BGCI and Fauna and Flora International have published a [document](#) presenting examples of effective tree conservation implemented by a range of stakeholders (landowners, companies, governments, conservation organisations, restoration practitioners and researchers). It includes case studies from different parts of the world.



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**Kew declaration on reforestation**

The declaration was drafted in response to the many large-scale tree planting initiatives, often monocultures of non-native species, which can exacerbate the problem of biodiversity degradation without providing a sustainable solution to carbon storage. It has been signed by over 2,600 experts and citizens from 113 countries. The Foundation supports this declaration and strives to apply its main principles to the projects it supports. The declaration is [available here](#).

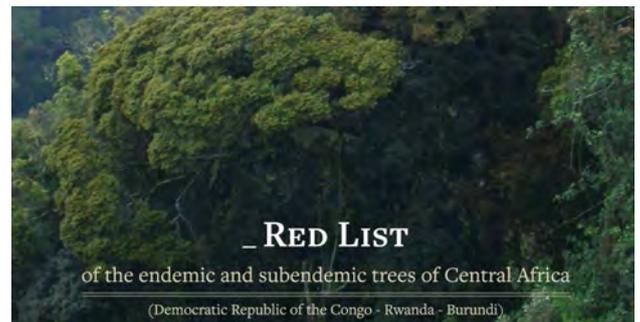


An article published in Mongabay is dedicated to the declaration and can be accessed [here](#).

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**Red list of endemic trees of Central Africa**

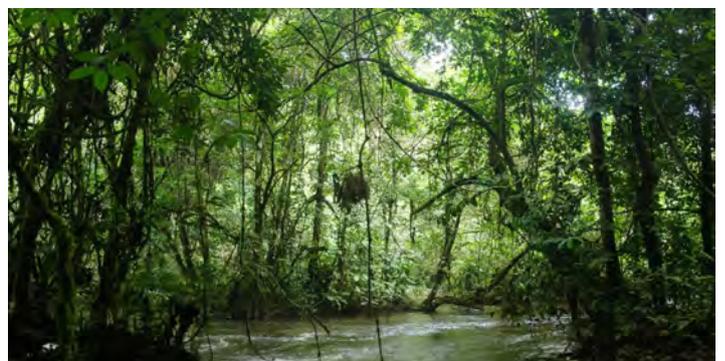
Meise Botanical Garden has just published the Red List of endemic and sub-endemic trees of Central Africa, a floristically rich region where many new species are regularly described. This report presents the assessments of about 300 species found in the Democratic Republic of Congo, Rwanda, and Burundi. It is illustrated with photos of wild species and herbarium samples, illustrations, and distribution maps. This work contributes to the objective of assessing all the world's trees. The report is [available here](#).



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**Forest diversity in Gabon**

Missouri Botanical Garden's West and Central Africa Program team has conducted several field missions in Gabon to better understand the distribution of its forest diversity. A new forest typology was adopted which will better define threatened forest habitats in Gabon and guide conservation policies. 426 endemic taxa have also been identified, which will help with the implementation of the High Conservation Value (HCV) concept used in forestry certification. The Programme's newsletter is [available here](#).



## Cameroon - Studying plant-insect interactions

The interactions between plants, their pollinators, and herbivores have been crucial in the evolution of angiosperms (flowering plants). A better understanding of these interactions also allows for better conservation in their natural habitat. Commercially available camera traps commonly used in wildlife studies have several technical limitations that restrict their field of application. Find out in this [practical guide](#) developed by our partners in Cameroon how to construct and use such camera traps.



## Global Consortia for the conservation of threatened trees

In order to mobilise botanic gardens and other conservation groups in the field, consortia have been established for eight priority plant groups: maples, magnolias, oaks, Nothofagus, Rhododendron, Dipterocarpaceae, Cycadaceae, and Ericaceae. Their goal is to mobilise botanic gardens and their partners (including conservation NGOs, universities, and government agencies) around the world to take concrete conservation action for these threatened groups where it is most needed. To find out more about these consortia and how to contribute [click here](#).



**GCC**  
Global Conservation  
Consortia

## Green status



The IUCN Red List of Threatened Species now allows a status quantifying the recovery of a species (Green status) to be associated with the risk of extinction (Category of threat). An example of a published green status can be [found here](#). This green status has been tested on trees and is an interesting tool for these organisms which, due to their longevity, could take several decades to change their Red List Category, even in case of intense successful conservation efforts. You can learn more about Green Status by typing "Green Status" on the [Red List advanced search page](#).



## Guide to the palms of New Caledonia



With over 3400 species of indigenous vascular plants, 76% of which are endemic, and a dramatic rate of degradation, New Caledonia is one of the 35 biodiversity hotspots on the planet. Palm and conifer species are numerous and particularly threatened.

Noé has coordinated the elaboration of action plans for some emblematic species and produced a beautiful guide to New Caledonian palms that can be downloaded [here](#).



## Brazil - Training to learn how to collect and preserve seeds



Collecting and conserving seeds of native species for propagation and forest restoration is not something that can be improvised. In order to optimise the results of its conservation efforts for the Atlantic Forest, the Brazilian Federation of Ecological Reserves of the State of Sao Paulo (FREPESP) has partnered with the Araribá Botanical Garden and BGCI to organise training for its technical teams. For an overview of these training days click [here](#).



The African zebrawood *Microberlinia bisulcata* is a Critically Endangered species endemic to Cameroon. Demand for its wood is high because of its unique colour, texture, and hardness. Given the current rate of illegal harvesting, all seed-bearing individuals could be logged within the next 2 years, pushing the species to the brink of extinction. [This article](#) makes recommendations to enhance the protection of zebrawood and Ebo forest, one of the remaining tracts of forest in the Cameroon and a Key Biodiversity Area.



### RECENT PUBLICATIONS AND ARTICLES

- **More good seeds needed in tree planting projects**

Researchers surveyed tree restoration practitioners from India, Malaysia, Indonesia, and the Philippines, and found that a third of practitioners regularly plant seedlings of unknown origin. This is unfortunately a worldwide problem and large amounts of money and effort go into restoration that may not create a resilient forest with the biodiversity and ecosystem services needed. The results of their study were published in the [journal Diversity](#) and also featured in [Mongabay](#).

- **Defaunation and seed dispersal**

With climate change accelerating and biodiversity vanishing, Evan Fricke, an ecologist at Rice University (Texas, USA), wanted to know how well plants across the planet might be able to move into new habitats. He and his colleagues gathered existing [data from thousands of studies](#) that looked in particular at how birds and mammals spread seeds, including how far they travel and what percentage germinate. [Their study](#) revealed that the average ability of plants to keep up with climate change has already declined by 60%, and that the extinction of threatened seed-dispersing birds and mammals would reduce this by a further 15%.

- **Living extremely old... like the California aristocene pines**

At a time when human life expectancy is beginning to decline for various reasons (pollution, viruses, cancers, lifestyles, etc.), particularly in certain developed countries such as the USA, other forms of life such as trees can easily survive to several hundred years, even millennia. Among these, the California aristocene pines (*Pinus longaeva*) hold the longevity record, with individuals living for 4,500 to 5,000 years, contemporary with the pyramids of Egypt. [But how do they do it?](#) Their strategy is based on three main points: avoiding competition, saving themselves, and adaptation.

- **Use of e-DNA in plant surveys**

e-DNA is increasingly used for documenting the presence of a number of organisms, in particular those in aquatic environments or soil, with no need to catch them. Researchers have now shown that for inventorying plants, simply capturing and analyzing the DNA that plants release into the air could work as well as putting boots on the ground. While such a tool should not be seen as a replacement to human presence in the field, [it could be of great help](#).

- **Towards new forestry practices in Germany ?**

Since 2018, more than 300,000 hectares of Germany's trees—more than 2.5% of the country's total forest area—have died because of beetles and droughts fueled by a warming climate. The massive dieback has raised hard questions about how a country renowned for inventing "scientific" forestry more than 3 centuries ago should manage forests so that they can continue to produce wood and protect ecosystems. Access the article [here](#).

- **Central African Forests**

A second, revised and extended edition of a book dedicated to Central African Forests was recently published. The book entitled 'Central African forests forever' includes 17 new chapters about opportunities and solutions for conservation and sustainable use of the Congo Basin rainforest. It is available in English, French, and Chinese, and can be ordered or downloaded for free [here](#).

- **Why are trees dropping so many nuts ?**

In some years, tree species reproduce prolifically and in sync, creating a bounty that will reverberate throughout the ecosystem for years. Using comprehensive plant reproduction databases, scientists are now exploring links between climate patterns and reproduction in order to answer questions around masting. Does the phenomenon occur in years

when seeds are likely to have favorable weather? Is the climate driving it? Is it a sign of next spring's weather? Read [this article](#) to learn more.

- **Largest living organism under threat**

Quaking aspen (*Populus tremuloides*) is the most widely distributed native North American tree species and tends to form clonal stands. In Utah, one tree has reached an enormous size, forming a single giant organism with a 43-hectare stand. The tree is made up of 47,000 genetically identical stems, arising from an interconnected root network. This single genetic individual weighs around 6,000 tons and, by mass, is the largest single organism on Earth. To learn more about this tree and the threats it faces from herbivores, diseases, and climate change, read [this article](#).

- **Determining the age of one of Africa's most famous tree**

Baobabs can't be dated like most other trees because some years they form no rings, and others they form more than one. By calculating the ratio of unstable carbon-14 to stable carbon-12 in samples of wood from a remarkable baobab specimen in Zimbabwe, a team of scientists found that the baobab's stems belong to three different generations, the most ancient dating back to roughly 1150 years ago. The full story is available [here](#).

- **Beech leaf disease is ravaging North American trees**

American beeches (*Fagus grandifolia*) are found across the eastern United States and Canada. In some areas they constitute a significant proportion of forests. Historically, a blight called beech bark disease has been the primary threat to the species. However now, beech leaf disease appears to pose a bigger danger; it is spreading fast and could have a major impact on American forests. Research is ongoing to understand what exactly causes the disease and to help identify a treatment. To learn more, read [here](#).

- **Earthquakes boost tree growth**

New research shows strong quakes can help trees grow by driving extra water into the soil surrounding their roots. These fleeting growth spurts leave signatures in wood cells that could also be used to better detect and date ancient earthquakes. Read the article [here](#).

- **Diversity is needed in tree plantations**

"A mixture of species planted together often grow more strongly than species planted individually". This is a message that a number of us have been pushing for some time in reaction to ill-conceived tree planting programmes. But it is also an observation made by Charles Darwin more than 150 years ago. How many more years will be needed to fully embrace this observation in order to conserve biodiversity, maximize carbon capture, whilst also maximizing resilience to disease outbreaks and climate change? More information [here](#).

- **A website dedicated to North African trees**

[This website](#) gathers existing information on all indigenous species of trees, shrubs, and climbing woody plants of North Africa. It covers about 880 species, from 290 genera and 76 families. A very useful resource for anyone working in the region.

- **Importance of private protected areas**

Private Protected Areas are areas governed by private individuals and groups—ranging from families and religious institutions to NGOs and companies. They are an important tool to protect biodiversity in particular threatened trees. As an example, in Brazil they represent almost half of the number of protected areas in the country and we are supporting projects involving a number of them. However, they remain poorly documented. To learn more read [here](#).

- **New plans to control the invasive emerald ash borer**

The emerald ash borer (*Agrilus planipennis*) is a beautiful metallic-green adult beetle with a red abdomen, but it is an invasive species responsible for the destruction of millions of trees. It likely arrived in the U.S. on imported wood packaging material from Asia sometime in the 1990s. Discovered in 2002 in Michigan, it has now spread to 35 states and has become the most destructive and costly invasive wood-boring insect in U.S. history. Scientists now aim to control it with tiny parasitic wasps which prey on emerald ash borers in their native range. To learn more about the attempt to conserve ash trees and this biocontrol plan, read [this article](#).

- **Another example of ill-conceived tree planting project**

There have been numerous announcements of ambitious tree planting projects in various parts of the world in the last few years, many claiming to break records in terms of the total number of trees planted or the number of trees planted in a day. Many were ill-conceived and have completely failed. This was the subject of a number of articles and led to the Kew declaration (see above). Here is [an additional example in Dubai](#), where 80% of 1 million planted trees are reported to be dead.

- **Regrowing forests have offset less than 10% of carbon emissions from deforestation**

The Brazilian Amazon has witnessed amongst the highest absolute rates of deforestation in the tropics, with a notable increase in recent years, placing Brazil in the top ten emitters in the world. Nearly 30% of deforested land in the Amazon has been abandoned, giving the forest a chance to regrow but a new study shows that secondary forests across the Amazon are absorbing just 9.7% of the emissions created by the destruction of old-growth forests in the region. That's despite these regrown habitats occupying 28.8% of all deforested land. It confirms that secondary forests are a poor substitute for the species-rich old-growth forests they replace. [Read here](#) to learn more.

- **How to pick a good tree planting project?**

In today's era where tree planting projects have become increasingly popular and are endorsed by governments and big company CEO's, Franklinia partners and organizations such as BGCI are amongst the best organizations to consult. However, Mongabay has also published a search tool allowing people wanting to take part in reforestation to identify if projects align with their interests. This Reforestation Directory was made using data available to the public from more than 350 tree-planting projects in over 80 countries. It uses criteria mostly drawn from the Forest Landscape Restoration (FLR) approach to guide investors in their choice of which projects to support. Learn more, explore and/or contribute to their directory [here](#).

- **Identify the best local and regional solutions for restoration**

PANORAMA Solutions is a partnership initiative to document and promote examples of inspiring, replicable solutions across a range of conservation and sustainable development topics. It offers a collection of various Forest Landscape Restoration (FLR) solutions that have been implemented successfully in the field around the globe. Navigating across this collection of successful local and regional solutions can allow practitioners to share and reflect on their experiences, increase recognition for successful work, and learn with their peers about how similar challenges have been addressed around the globe. Find out more [here](#).

- **Call for conservation news - Oryx**

The journal Oryx is looking for items for their Conservation News (previously unpublished information, up to 500 words) and Briefly (summaries of previously published news, up to 150 words) sections of the May 2022 issue. An opportunity to raise the case of threatened trees. The submission deadline is 10 February 2022. For more information, visit [Oryx website](#).

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