

Trees are essential for life on earth

There are an estimated 80,000 tree species of which around a quarter are facing extinction

Sharing knowledge • Taking action • Preventing extinction



BGCI

Plants for the Planet



GLOBAL TREE ASSESSMENT



What is the Global Tree Assessment?

The GTA has two main outputs that we plan to deliver by 2020:

- 1) The world's first global list of tree species, comprising the scientific names of all known tree species and maps of the countries in which they naturally occur.
- 2) Assessments of whether the species are rare or threatened, including which species most need conservation action.

The tree list and threat assessments will be published online and will be available, open access, to all.

Why do we need the Global Tree Assessment?

Only 25,000 tree species (30% of the total) have been assessed globally or nationally for their risk of becoming extinct. Of these, roughly 40% (9,641 species) are assessed as threatened with extinction, enabling conservation effort to be focused where it is most needed.

However, without knowing which of the remaining 70% of unassessed tree species are threatened and what the threats are, conservationists cannot effectively protect these trees.

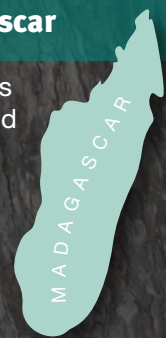
Why does this matter?

Trees are essential for human and other animal life on Earth in that they capture energy from the sun and convert it into food in the form of their seeds, fruits, leaves and roots. Human life is further sustained by the medicines, timber and fuel that trees provide. Trees are central to many ecological processes such as climate regulation (including carbon dioxide absorption), soil fertility and the purification of both water and air.



Threatened trees of Madagascar

Madagascar has 3,046 tree species of which 2,773 (91%) are only found in Madagascar. Only 18% of Madagascar's primary vegetation remains, and most of its tree species are under threat from habitat loss or over-exploitation. The extinction risk of individual tree species in Madagascar is poorly documented and only 10% of the Malagasy trees are currently included in the IUCN Red List. This is in sharp contrast to the island's animals, with all birds, mammals, reptiles and amphibians already assessed.



Luis Roberto Gonzalez Torres



Assessing timber species

Part of the Global Tree Assessment is an up-to-date assessment of the world's commercial timber species. Timber trees contribute some \$468 billion to the global economy every year. They also provide crucial ecosystem services underpinning ecosystem stability, function and biodiversity. A working list of 1,575 timber species has been produced by the GTA team and all species have been mapped. The next step is for 300 of the more restricted range species to be assessed using IUCN Red List Categories and Criteria. The results of the complete assessment will be invaluable for implementation of sustainable, legal timber harvesting, trade policies and regulations.

The main threats to tree species are habitat degradation, invasive alien species and over-exploitation, and these threats are likely to be exacerbated by climate change.

Maintaining tree diversity will be critical for solving some of this century's major challenges, including food security, energy, water scarcity, human health, habitat degradation and both mitigation and adaptation to climate change.

Juan Pablo Moreira / FFI



Tackling climate change

Climate change is an increasing threat that is already affecting trees, including our most important commercial species. Not only are trees affected by changing temperatures, they are also threatened by the spread of invasive pests and diseases, and the increase in frequency and magnitude of natural disasters (fire, droughts, hurricanes, cyclones, etc.). The decline of tree species can lead to rapid decline of whole ecosystems, their wildlife, livelihood values and carbon stocks. Conserving tree diversity helps to ensure resilient ecosystems are sustainably managed and restored using appropriate species. Conserving trees directly supports climate change adaptation and mitigation.



The Global Tree Assessment will provide data for governments, companies, civil society and forest communities so that tree species can be managed, restored and saved from extinction.

Who are the GTA partners?

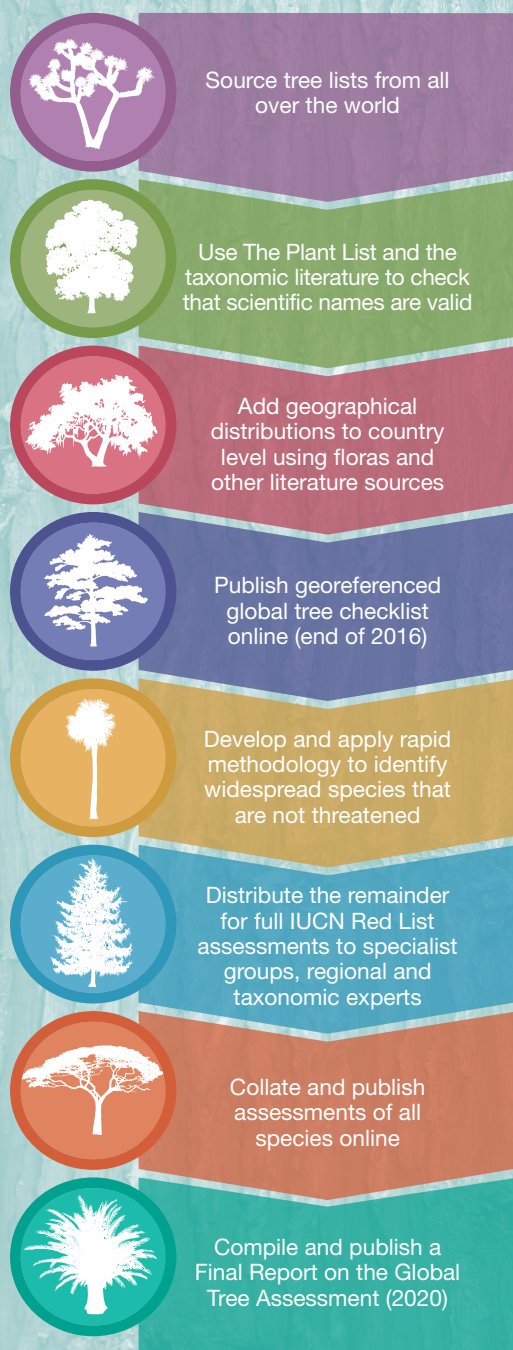
The Global Tree Assessment is managed and coordinated by Botanic Gardens Conservation International (BGCI) working with the International Union for Conservation of Nature (IUCN) and a wide range of national and local organisations and individuals. The IUCN Species Survival Commission's Global Tree Specialist Group has over 80 tree experts from countries all around the world who are contributing information and carrying out species assessments.

BGCI is the pivotal centre of the global network of around 2,500 botanic gardens and arboreta. Our members include large and renowned gardens – Kew, Missouri, Morton Arboretum, Singapore, Rio de Janeiro, Sydney, Bogor, Edinburgh, Havana and Shanghai – all of which are involved in the Global Tree Assessment. In addition, we work with and support many smaller botanic gardens situated in the world's plant diversity hotspots. We are also building partnerships with forestry institutions and at a global level work closely with FAO.

The process

The GTA partners and their associated networks include the foremost tree conservation experts in the world.

The GTA process is explained in the diagram



The cost

The GTA is already a project in progress. Current expenditure is approximately US\$300,000 per annum (US\$1.5 million over the next 5 years).

The following additional funds are sought:

US\$4 million	total amount required to complete the GTA
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Or:

US\$15,000	to convene a meeting of tree experts
US\$5,000	to hold a threat assessment training workshop
US\$500	to carry out a desk-based assessment of 10 plant species.



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