

Global overview of the conservation status of Magnoliaceae



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Setting the scene:

The Global Tree Assessment and the Global Trees Campaign



- Cataloguing the world's trees
- Prioritising tree species for conservation action
- Taking direct conservation action working with local partners



Cataloguing the world's trees: GlobalTreeSearch



Welcome to GlobalTreeSearch!



The most comprehensive database of tree species.

- Search over 60,000 tree species names and their country distributions.
- Find out the geographical distribution of a tree species.
- Discover all tree species found in a country

GlobalTreeSearch is not a static database and will evolve as new information comes to light. If you spot a mistake (in taxonomy, distribution or lifeform) or have data which you think could improve the database, please get in touch with globaltreesearch@bgci.org.

[More information about GlobalTreeSearch and how the data were compiled.](#)

[More information on data sources used and acknowledgements.](#)

Data retrieved through GlobalTreeSearch is subject to the [BGCI data agreement](#).

To search the database, enter search criteria below (at least one of genus, species, country required)

Scientific name:

Genus Species Country

Search Plants

We found 1 matches

Family	Taxon name	Author	Country distribution	Comment
Magnoliaceae	Magnolia cathcartii	(Hook.f. & Thomson) Noot.	Bhutan; China; India; Myanmar; Thailand; Viet Nam	

[download as CSV file](#)



bgci.org/global_tree_search.php?sec=globaltreesearch?sec=globaltreesearch

Prioritising tree species for conservation action



Global Tree Assessment

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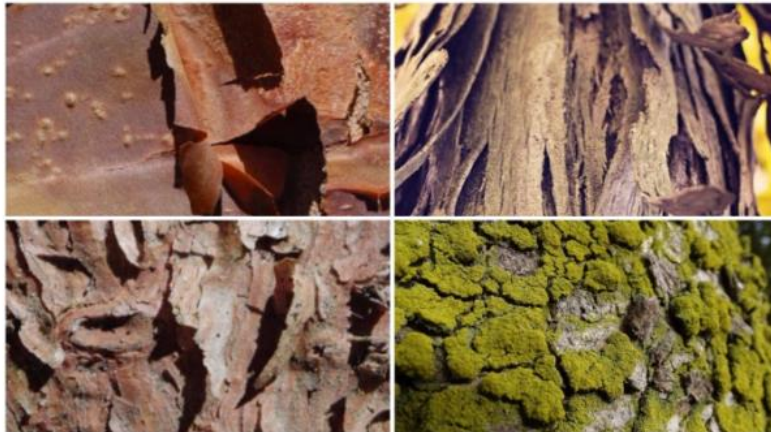
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Global Tree Assessment

Conservation assessments for all the world's tree species by 2020

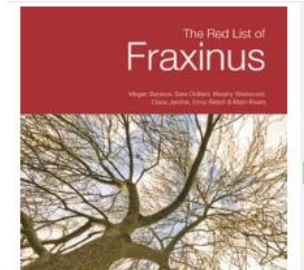


The Global Tree Assessment aims to assess the conservation status of every known tree species by the year 2020.

Forty-four percent of all the world's trees are still lacking an assessment of extinction risk. The Global Tree Assessment will provide prioritization information to inform conservation action for trees, so that no tree species becomes extinct.

The Global Tree Assessment, led by BGCI and the IUCN Species Survival Commission (SSC) Global Tree Specialist Group (GTSG), continues to develop an extensive global collaborative partnership to safeguard the world's threatened tree species from extinction. Many NGOs, national red list programmes, botanic gardens and other groups have made pledges to ensure that the flora of their region, country or genus of interest is assessed in this time period. However, there are still many trees to assess. Anyone can join the GTA!

Tweets by @GTA_GTSG



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GTA Target

27,194 assessments out of 60,065 projects



globaltreeassessment.org/

GTA Progress



GTA Global Tree Assessment

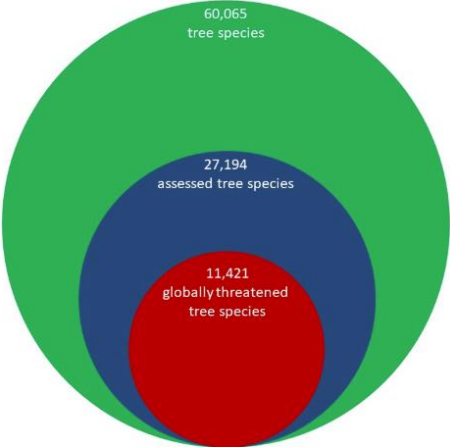
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Progress

GTA is already under way and good progress has been made. See here for more information on the process.

Our latest analysis (26/03/2019) shows that 45% of all trees have a conservation assessment. This includes all known published tree conservation assessments as listed on ThreatSearch which includes all tree assessments found on the IUCN Red List of Threatened Species (12,587 assessments).

Around 48% of the already assessed trees are assessed as threatened to some level and 42% of all assessed trees are threatened globally. This means that at least 19% of all tree species are threatened with extinction globally.



Opportunities

Explore the regions and plant groups that are in need of your help

[Read more...](#)

Process

Learn more about the plan of action for the Global Tree Assessment

[Read more...](#)

Success stories

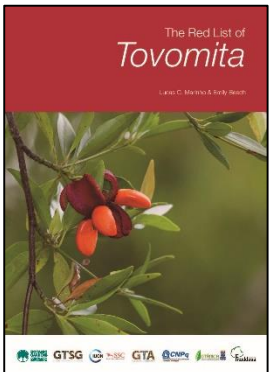
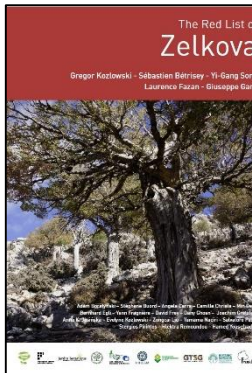
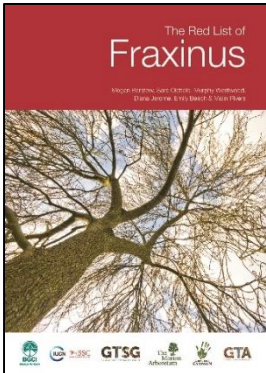
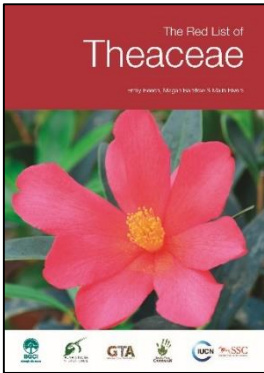
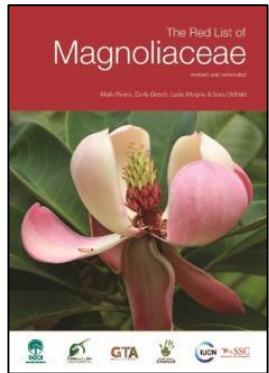
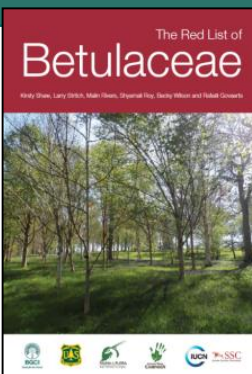
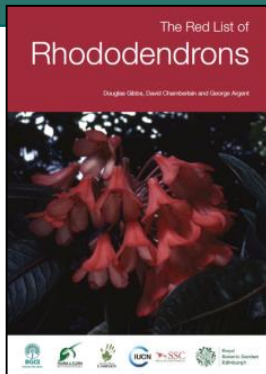
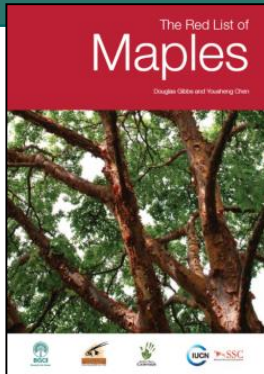
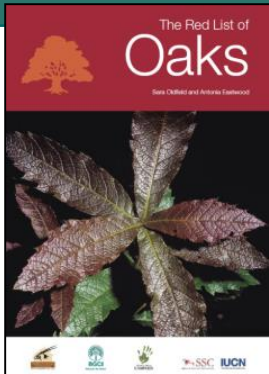
People, plants and projects that have contributed to the Global Tree Assessment

[Read more...](#)



BGCI

Examples of taxonomic Red Lists



Red List of Global Trees

Zelkova	83%
Magnolias	48%
Theaceae	33%
Maples	28%
Rhododendron	27%
Oaks	27%
Ash	21%
Tovomita	8%
Betulaceae	7%

<http://globaltrees.org/resources/resource-type/red-list/>

Taking direct conservation action



Threatened Spe x | GlobalTreeSearch | Botanic Gard x | Home - Global Trees x +

not secure | globaltrees.org

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Support us →

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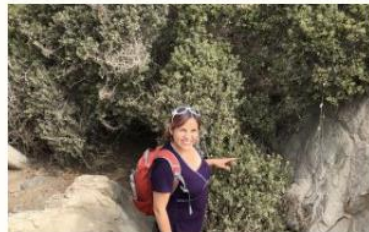
Saving the World's Threatened Trees

Over 10,000 tree species are threatened with extinction. Help us secure their future.

Support us →



Plant conservation unwrapped



The people working to save trees



Our successes in 2018

Global Trees Campaign (GTC) objectives



1. To identify and prioritise the trees of greatest conservation concern



2. To ensure that the world's threatened tree species are protected with populations recovering *in situ*



3. To empower partners and practitioners to undertake effective conservation for threatened trees



4. To mobilise other groups to act for threatened trees

GTC project implementation – general activity strands: Integrated *ex* and *in situ* conservation



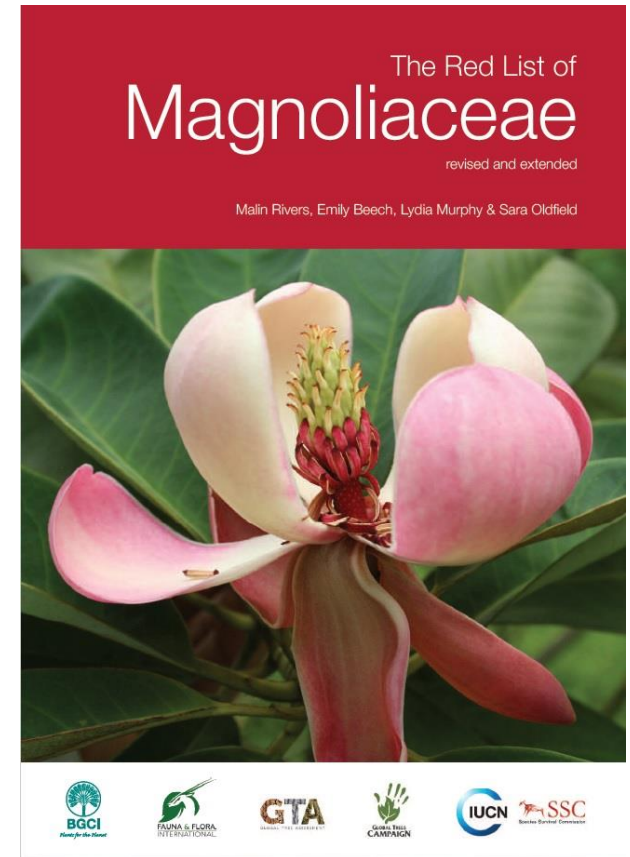
- Survey and inventory
- Collection of propagules
- Propagation protocol development
- *Ex situ* collection development – seed bank, living collection
- Public outreach / engagement – display collection
- Initiation of *in situ* recovery – population reinforcement / (re)introduction
- Monitoring and evaluation



Red List of Magnoliaceae, 2016



Assessed 304 species –
Magnolia and *Liriodendron* spp.



Overall findings

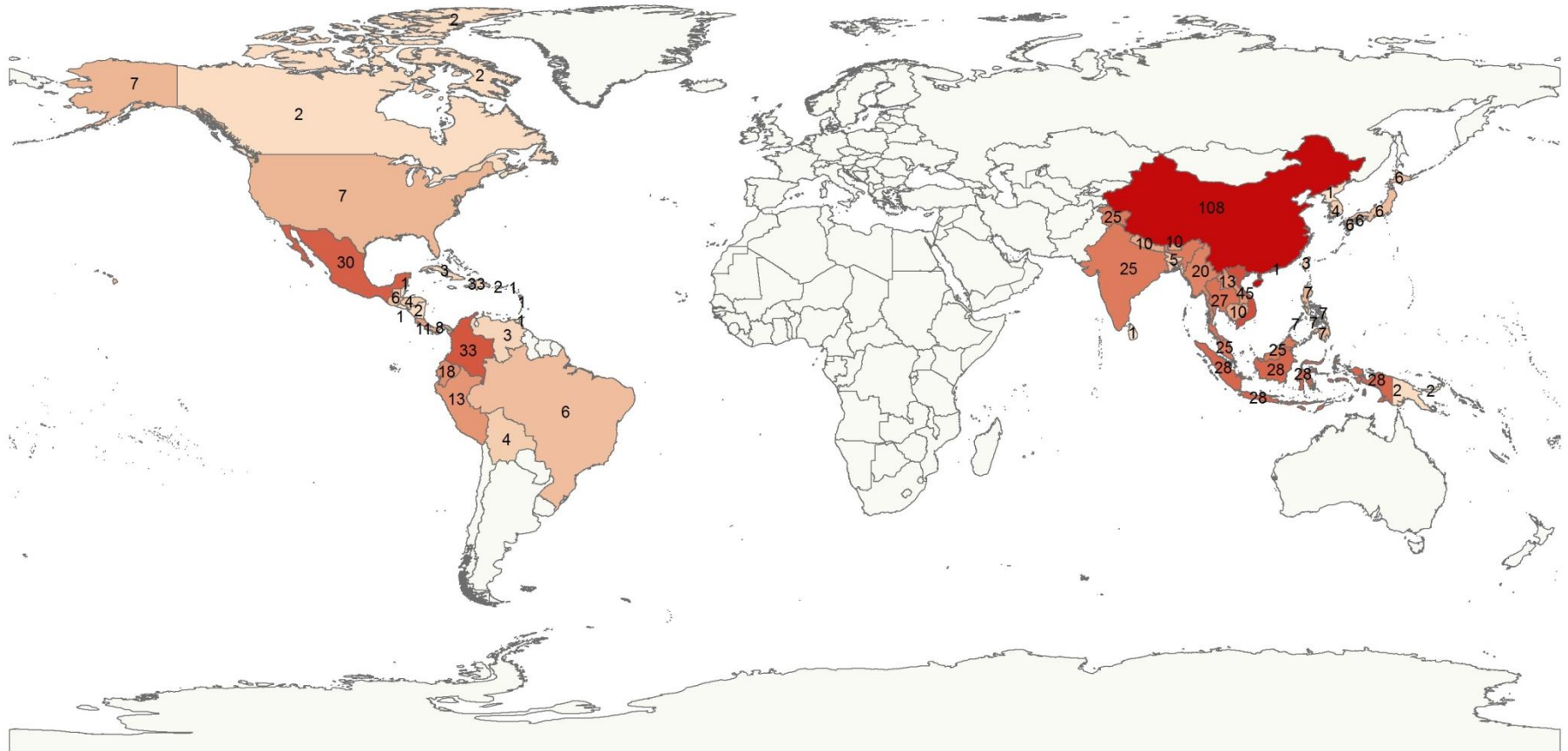
Nearly half – 48% – of the species assessed as threatened:

- Critically Endangered
- Endangered
- Vulnerable



Magnolia amoena (VU)

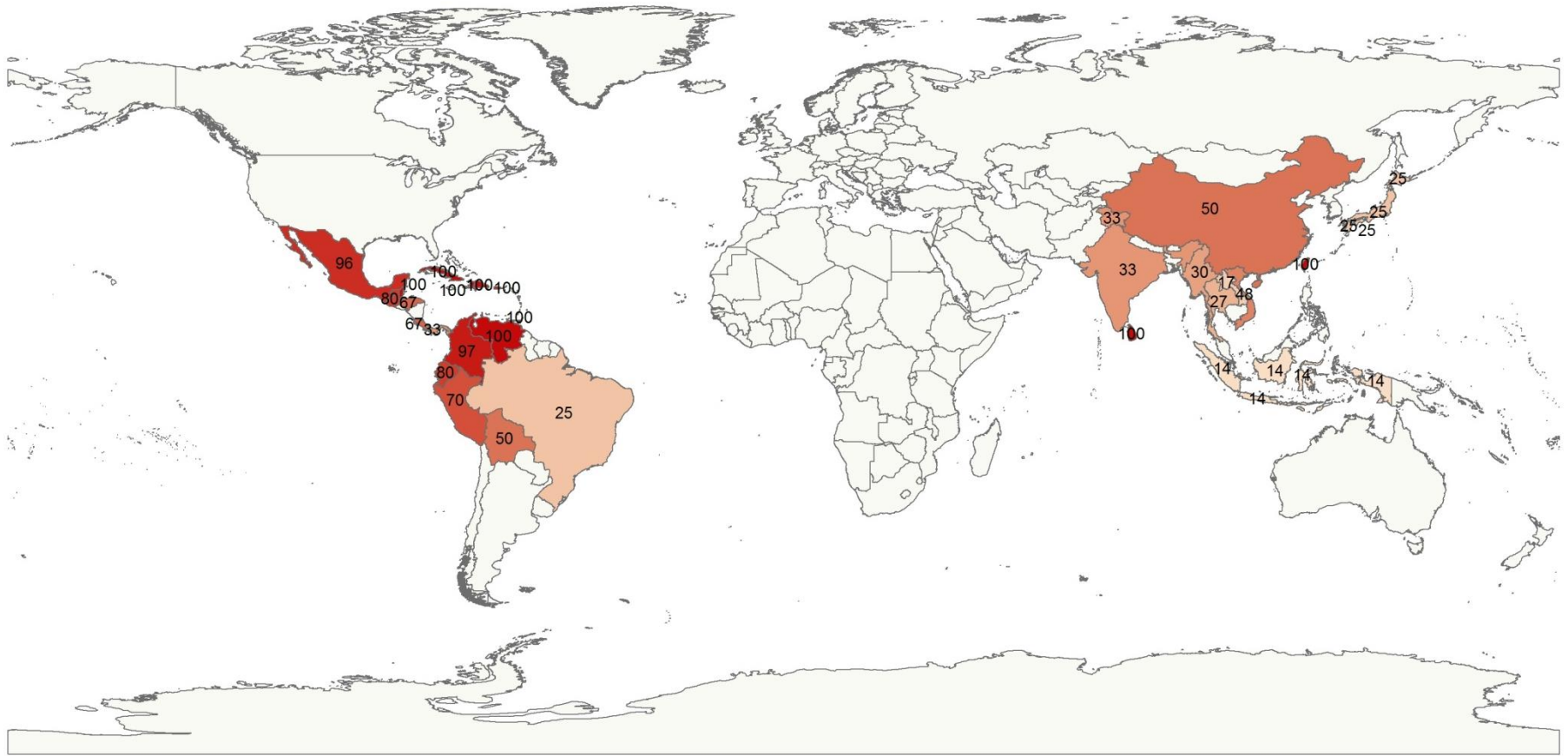
Number of Magnoliaceae species per country



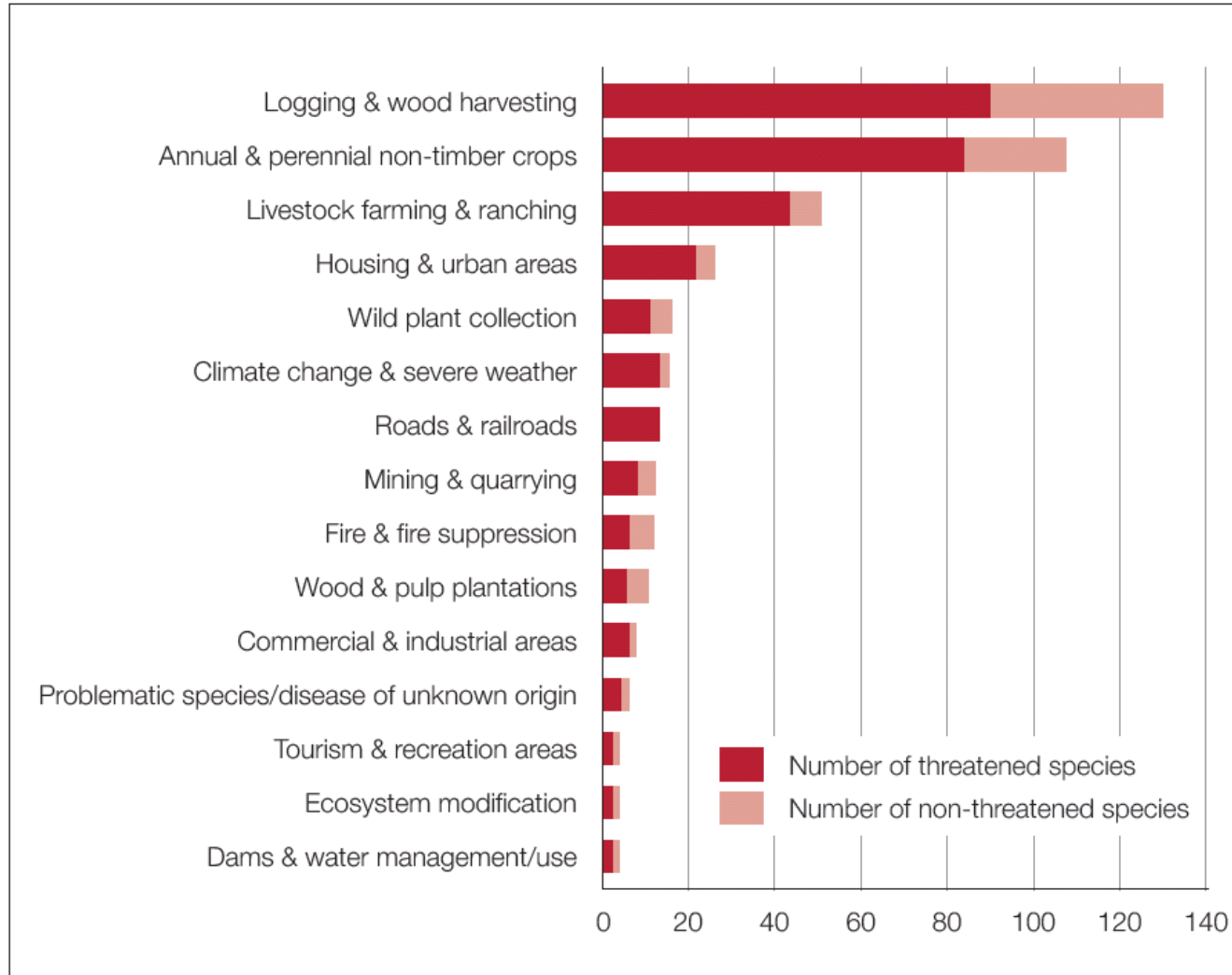
New World: 134 species – 71.6% threatened, 15.7% DD

Old World: 172 species – 30.2% threatened, 44% DD

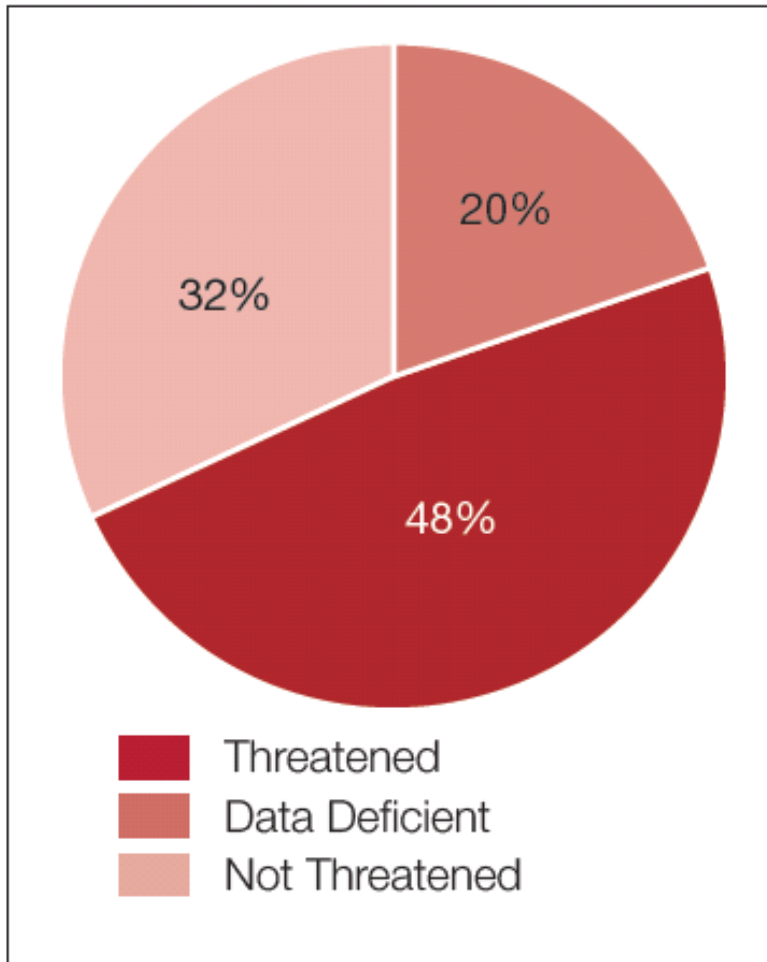
Percentage of threatened species per country



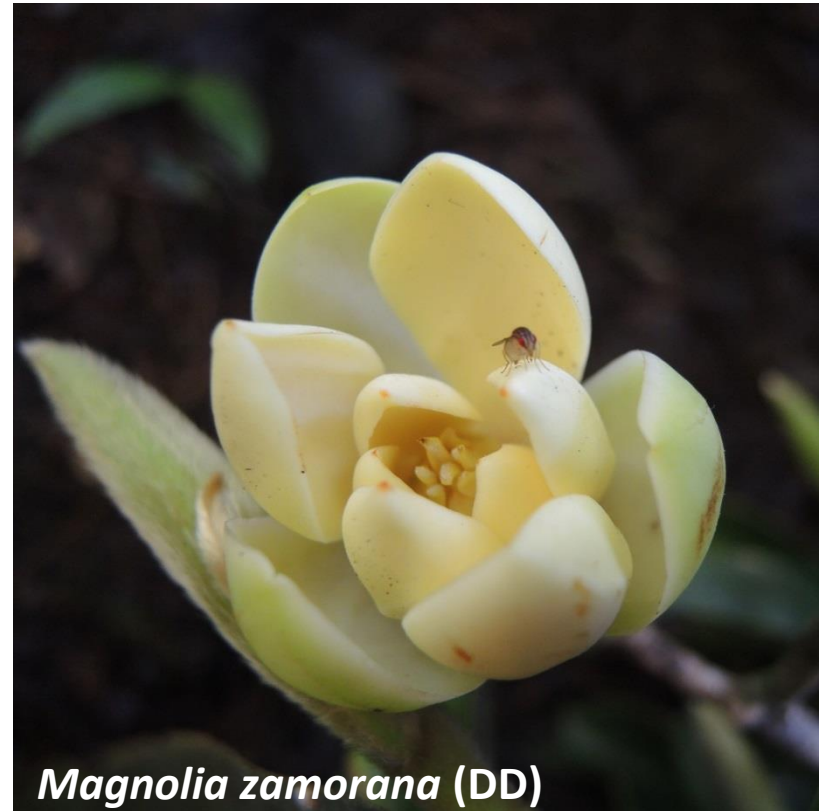
Major risk factors to Magnoliaceae using the IUCN threat classification system



Bottleneck: data deficiency



1 in 5 species are still considered Data Deficient (DD)



Magnoliaceae *ex situ* survey, 2016

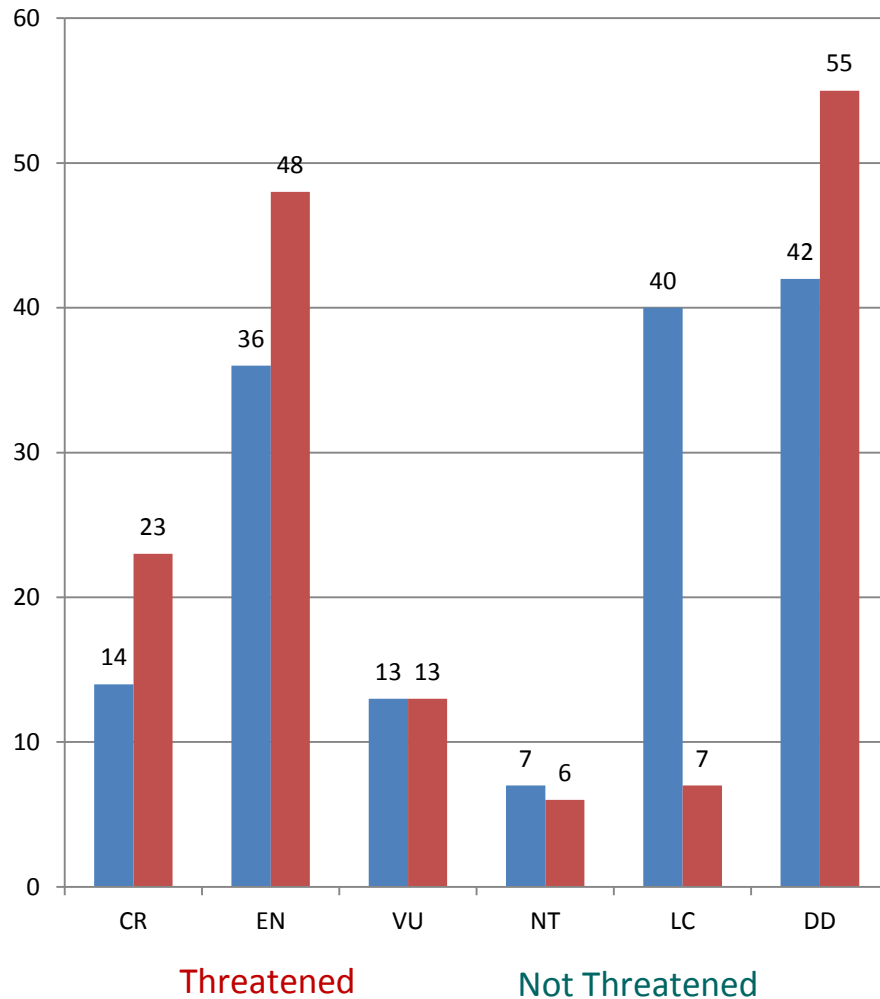


Based on **9918** records
from **490** institutions
in **61** countries



Magnolia nitida (VU)

Magnoliaceae species found in and absent from *ex situ* collections



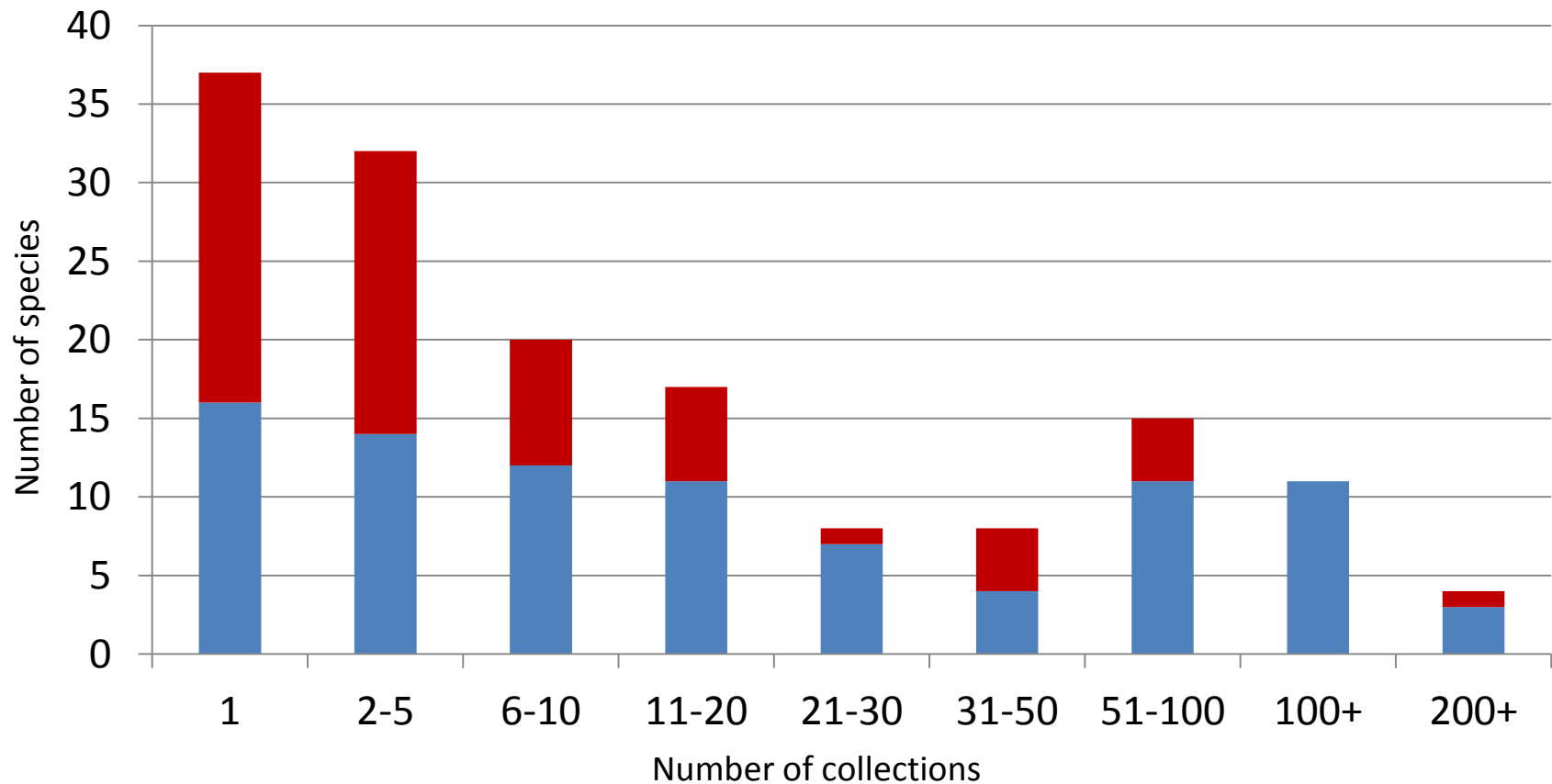
Presence and absence of Magnoliaceae species in *ex situ* collections for each IUCN Red List Category

- Species reported in ex situ collections
- Species not reported in ex situ collections

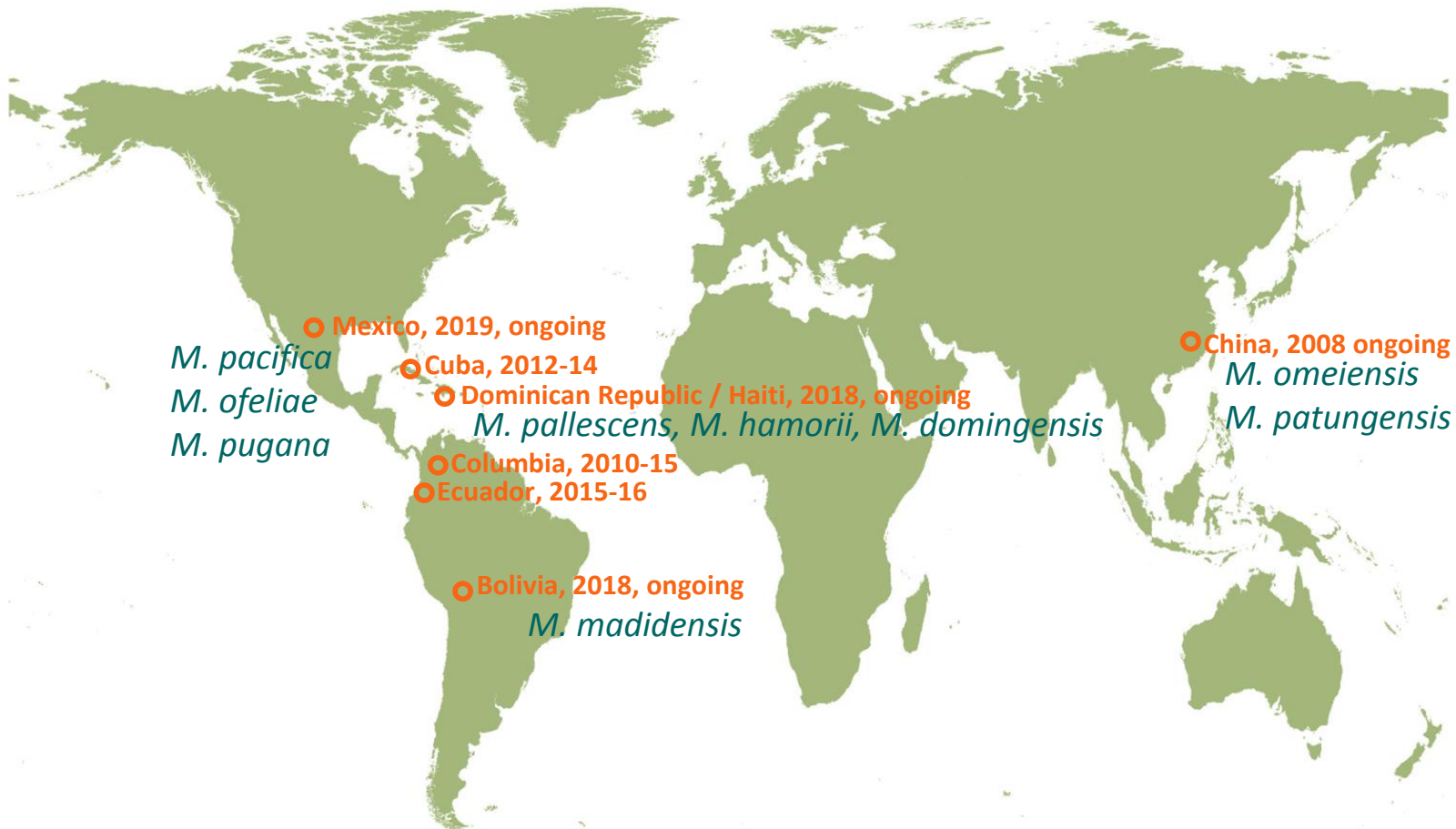
Number of collections of Magnoliaceae species



■ Non threatened ■ Threatened

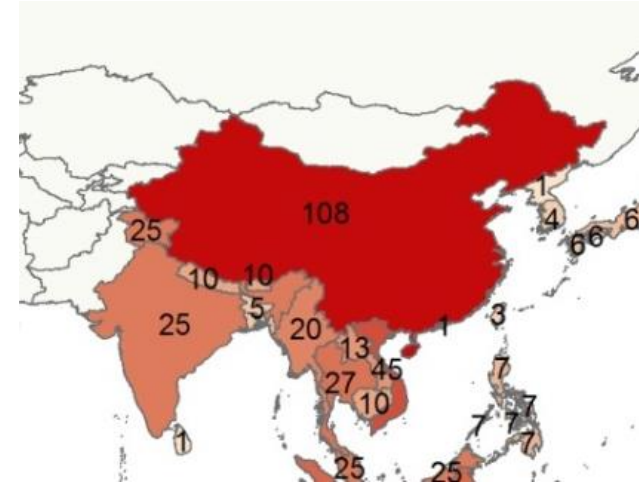


Past and ongoing magnolia conservation projects supported by BGCI



Case study – China

- 108 species, 57 endemic
- 33 species are threatened and a further 41 are data deficient
- As in other areas of high magnolia diversity, increased deforestation, logging, habitat destruction and limited reproduction in the wild pose a major threat to the species' survival



Case study – *Magnolia sinostellata*, China



Integrated conservation of *Magnolia sinostellata* – initiated in 2015

- Endemic to southern Zhejiang
- Known from 4 locations
- Endangered B1 ab(iii,v)
- Threats: habitat loss / deforestation, over-collection



Case study – *Magnolia sinostellata*, China

Project interventions:

- Field surveys
- Collection of propagation material and molecular analyses
- *Ex situ* multiplication – to date some 2,800 saplings established

Project outcomes:

- Enhanced propagation techniques to produce significant numbers of individuals
- Secured in *ex situ* collections and improved conservation status in the wild
- Local communities in the target areas actively engaged in the propagation and cultivation of *M. sinostellata* as well as in the conservation work



Case study – *Magnolia omeiensis*, China

Integrated conservation of *Magnolia omeiensis* – initiated in 2016



- Endemic to southern Sichuan
- Known from 2 locations
- ~100 individuals remaining in the wild
- Critically Endangered C2a(i)
- Threats: habitat loss / logging / limited seed production and low germination rates



Case study – *Magnolia omeiensis*, China



Project interventions to date:

- Field surveys in both locations
- Collection of plant material for molecular studies and propagation
- Artificial pollination trials *in situ*

Project outcomes:

- Significant stock of saplings (several thousands) available for conservation collections at Emeishan Botanic Garden and for restoration
- Population reinforcements trialled with some 1,000 saplings planted *in situ*
- Survival of the species is greater as result of environmental sensitization work, *ex situ* conservation collections and population reinforcement programmes



Pollination trials

Case study – Dominican Republic



Integrated conservation of Dominican Republic cloud forest magnolias – initiated in 2018

- *M. pallescens* (EN)
- *M. hamorii* (EN)
- *M. domingensis* (CR)

Threats: habitat loss, livestock grazing, fires, infrastructure development

Plan de acción de conservación
integrada de las *Magnolias* (Magnoliaceae)
amenazadas de República Dominicana:

Magnolia domingensis – *M. hamorii* – *M. pallescens*



Challenges



- New and periodic updates to existing assessments
- Localisation of target species and access during project implementation
- Limited genetic representativeness in *ex situ* collections – resulting from limited availability of propagation material, limited viability of seed material, limited propagation success, etc.
- Recovery programmes *in situ* – medium and long-term management; and
- Sustainability once project funding has come to an end

Opportunity: Global Magnolia Conservation Consortium



- Enhanced exchange of expertise and plant material
- Improved updates or delivery of new conservation status assessments / red listing
- Coordinated, practical conservation action of target species' in
 - *ex situ* collections
 - *in situ* recovery programmes

Thank you!



BGCI



Nombre Común:	COPACHI	
Nombre Científico:	<i>Magnolia wolffi</i>	
Familia:	Magnoliaceae	
Usos:	Maderable, forestación, artesanías	



BGCI

Connecting People • Sharing Knowledge • Saving Plants

Our Mission is to mobilise botanic gardens and engage partners in securing plant diversity for the well-being of people and the planet

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