Building a Global System for the conservation of all plant diversity

The role of BGCI and its members in educating policy makers, plant conservation practitioners and broader society

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The context: diminishing plant diversity




20% of plant species are currently threatened with extinction

Why plant diversity is important

Plant-based solutions are required to address all of the major environmental challenges:

- Food security
- Water scarcity
- Energy
- Human health
- Biodiversity conservation
- Climate change

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Why plant diversity is important

Plant diversity enables human innovation, adaptation and resilience

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The role of botanic gardens

Botanic gardens are uniquely placed to conserve and manage plant diversity. We can:

- Find plants using herbarium records
- Identify plants with our floras and expertise
- Conserve plants in seed banks, tissue culture, gardens and *in situ*.
- Restore habitats and reintroduce plant species
- Manage diverse species assemblages in diverse landscapes
- Communicate knowledge about plant diversity to broader society

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The role of botanic gardens

There is no technical reason why any plant species should become extinct

Challenges

- Botanic gardens are visitor attractions, educational institutions, museums, scientific, horticultural and conservation organizations.
- Botanic gardens are so multi-faceted that people are often confused about their purpose.
- As a professional community, botanic gardens don't speak with one voice
- Botanic gardens are often seen as 'nice to have' rather than essential
- Funding is a challenge in many parts of the world

A rational, cost-effective Global System: crop conservation

- The International Treaty on PGRFA
- A Global Plan of Action for PGRFA
- A review process (FAO SOWPGRFA)
- A network of international institutions and *ex situ* collections
- A global portal of accession-level data (Genesys)
- A universal gene bank information management system (GRIN Global).
- Advanced bioinformatics tools that allow users to mine crop characterisation data (DIVSEEK)
- An endowment fund to conserve crop diversity in perpetuity (Crop Trust)

A rational, cost-effective Global System: botanic gardens

- The Convention on Biological Diversity
- The Global Strategy for Plant Conservation
- A review process (GPPC/BIP)
- A network of international institutions and *ex situ* collections
- A global portal of accession-level data (PlantSearch)
- A universal accessions information management system
- Advanced bioinformatics tools that allow users to mine characterisation data

Working together more effectively: what do we need to do?

- Organize ourselves as a professional community, and promote our unique skills to policy makers and funders
- Focus BG plant conservation efforts on the rarest, most threatened, useful and challenging species
- Promote and prioritize plant conservation and use in botanic gardens
- Work with other sectors (e.g. forestry, horticulture, agriculture and *in situ*)
- Raise awareness about the importance of plant diversity and enable the conservation and use of plant diversity in broader society through provision of education, tools and information

Send out a positive message!

Working together more effectively: how can BGCI help?

1. Advocacy: Promote the role of botanic gardens to policymakers and funders in delivering a botanic garden–centred, rational, cost-effective 'Global System' for the conservation and use of all plant diversity.

2. Knowledge hub: Build technical capacity in the botanic garden sector in plant conservation and use policy, practice and education. Clearing house for best practice, training, resources and expertise.

3. Funding: Mobilise funding and partnerships to deliver projects and outcomes.

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1. Promoting the role of botanic gardens: advocacy

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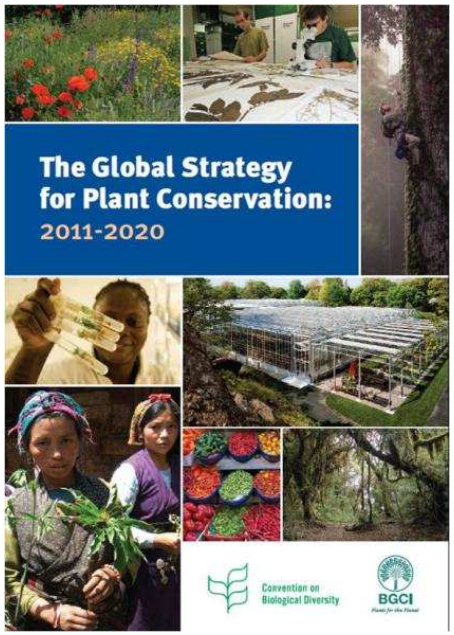
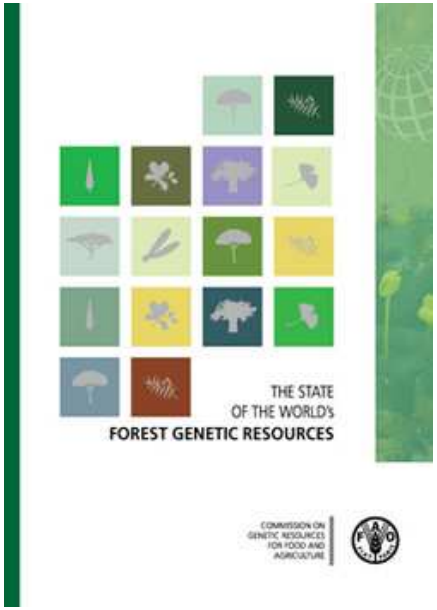


Convention on
Biological Diversity



1. Promoting BGs: technical networks

The Australian Network for Plant Conservation Inc.
working to save Australia's native plants

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1. Promoting BGs: infrastructures

Garden Search
Locate botanic gardens around the world




1. Promoting BGs: collections

Total number of accessions: 1.3 million
Estimated total number of species: 197,000

Estimated proportion of total plant diversity in botanic gardens & arboreta: 56%

Estimated proportion of critically endangered and endangered trees in botanic gardens & arboreta: 26%

1. Promoting BGs: public engagement

250 million people visit botanic gardens every year

We reach many millions more through our websites, publications and public engagement activities.

Botanic gardens are wonderful places to visit and are often under-used as venues.

2. Building technical capacity: BGCI as a knowledge hub

- Case studies and projects
- Training courses and resources
- References and further details
- Registers of expertise, networks and centres of excellence

2. Building technical capacity: case studies

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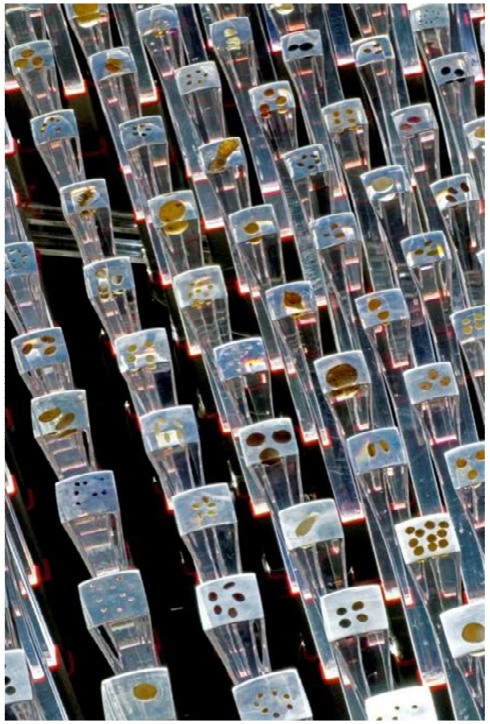

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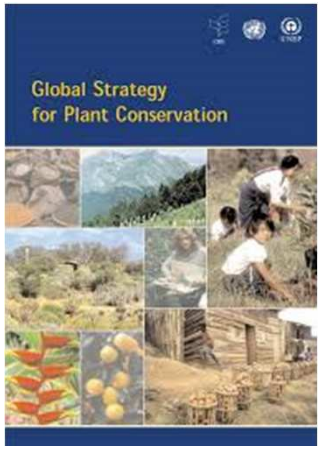
2. Building technical capacity: training courses

2. Building technical capacity: references & resources



Policy: http://www.bgci.org/ourwork/influpolicy/

Red listing: http://www.bgci.org/ourwork/redlisting/
Seed conservation: http://www.bgci.org/ourwork/seedhub/
Ecological restoration: http://www.bgci.org/ourwork/restoration/
Plant health & biosecurity: http://www.bgci.org/ourwork/ipsn/
Tree conservation: http://www.bgci.org/ourwork/globaltrees/

Education: http://www.bgci.org/education/resources/

3. Mobilising funding & resources

BGCI funds projects and training all around the world, equivalent to ten times what it receives in subscriptions from its members.

In 2014 BGCI provided funding and/or training to 107 botanic gardens on 5 continents

In 2015 we will disburse US$1.5 million in project funding to botanic gardens in our network

Conclusions

The loss of plant diversity is the most urgent and important issue that botanic gardens need to focus on but it isn't always seen as a priority

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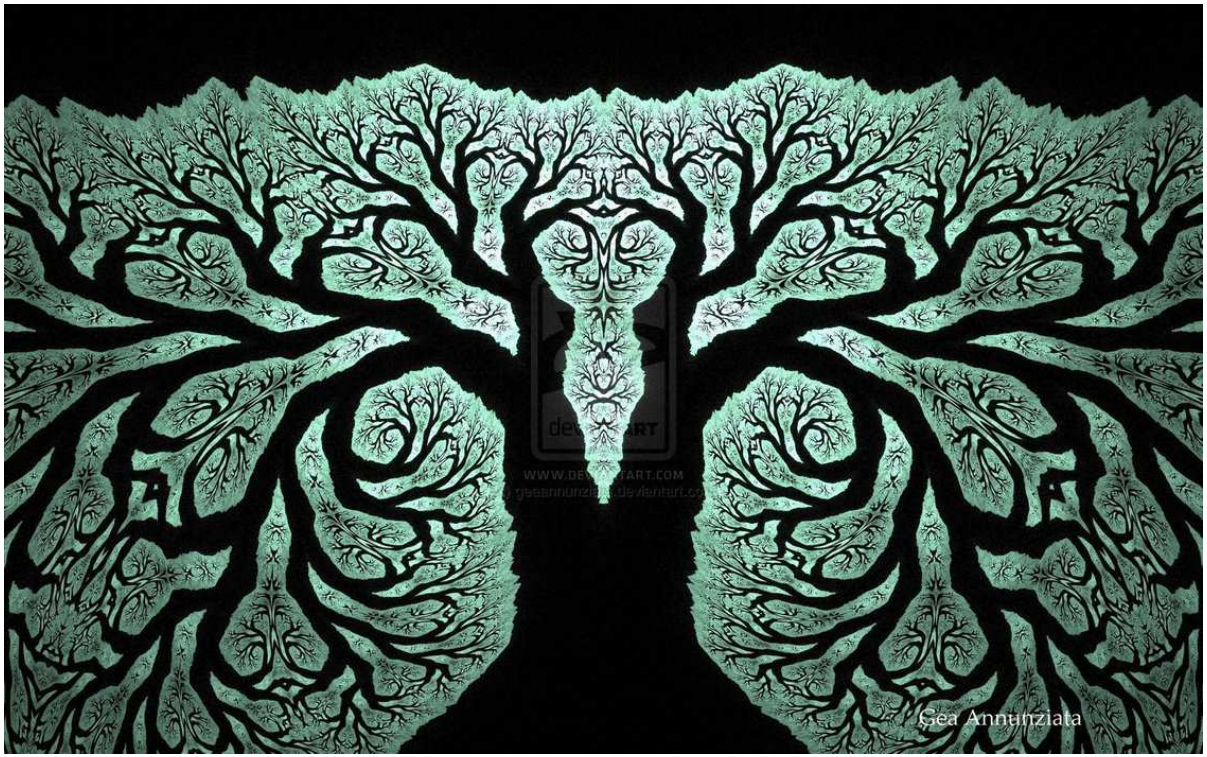
Conclusions

Botanic gardens, as a professional community, have unique knowledge and skills related to conserving, managing and communicating the importance of all plant diversity.



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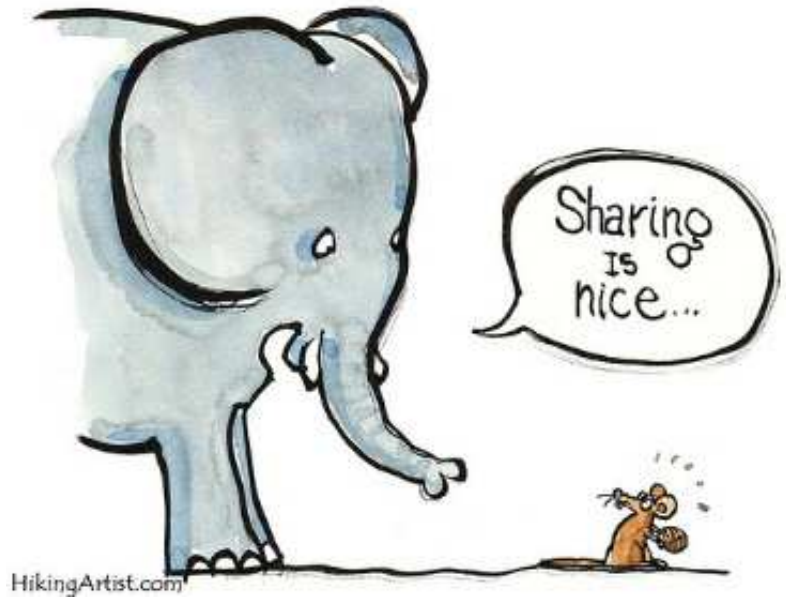
Conclusions

Botanic gardens need to show greater leadership in conserving, managing and communicating the importance of plant diversity

Conclusions

Botanic gardens need to build their own capacity and organize themselves in a rational and cost-effective way through sharing approaches and results



Conclusions

Botanic gardens need to work with society to share knowledge and effort.

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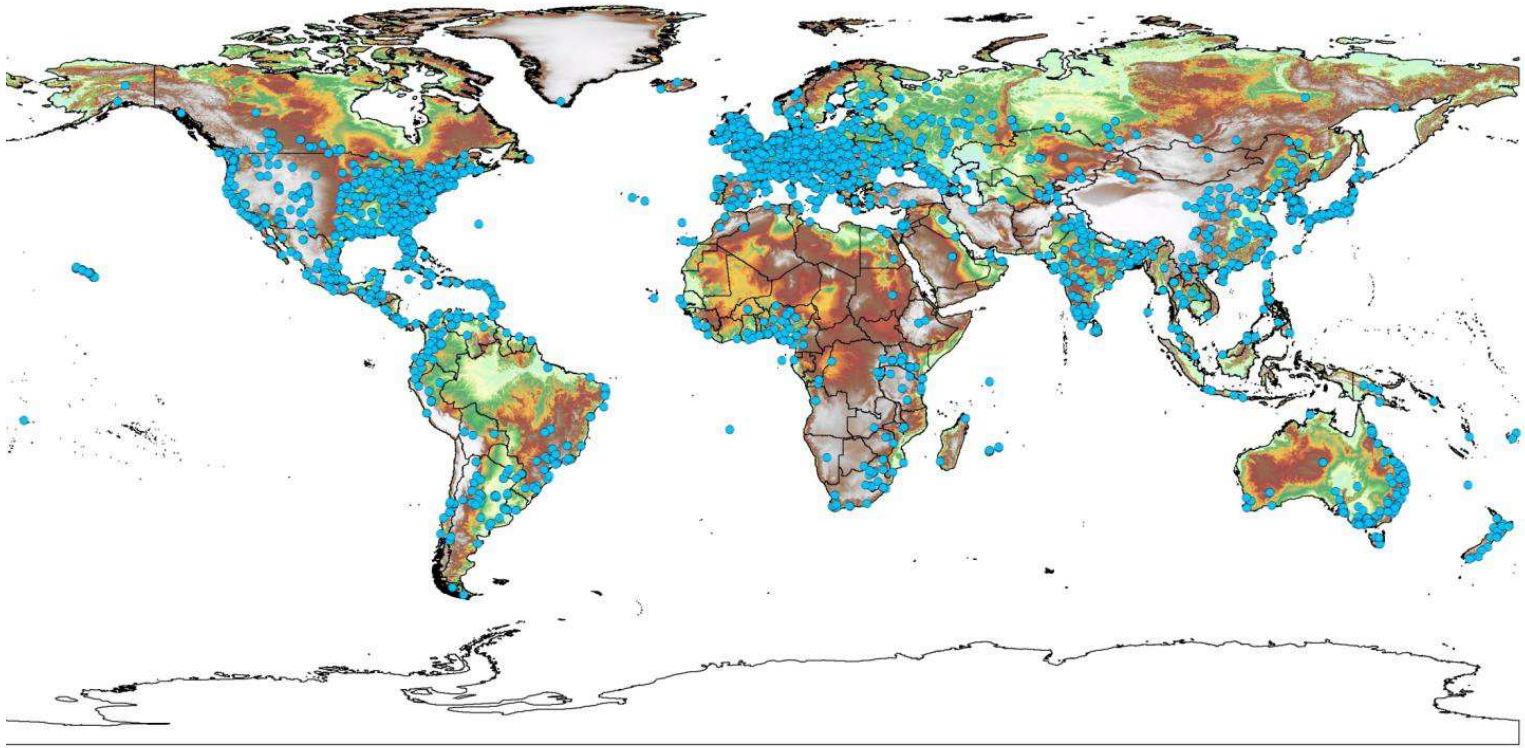
Let us know your views



http://www.bgci.org/joinin/members/