

Conserving the diversity of native trees across Asia for sustainable use

Project APFORGIS supports conservation and restoration by improving the availability of species information

APFORGIS – Filling the knowledge gaps for gene conservation of Asian tree species is a regional project implemented in Asian countries from Dec 2017 to Dec 2019. The project is coordinated by Bioversity International and implemented in collaboration with the Asia Pacific Forest Genetic Resources Programme (APFORGEN). The project is funded by the German Government through the Federal Ministry of Food and Agriculture.

Thousands of ecologically and socio-economically important tree species in Asia are threatened, yet very little information is available on their historical and current distribution, patterns of genetic diversity, intensity of threats across their distribution ranges, or availability of seed sources to support restoration.

Effective conservation strategies for these species and their genetic resources cannot be identified without improving knowledge on the species' distributions and the threats they are facing.

APFORGIS is a regional project that produces up-to-date information on the distributions of valuable Asian tree species and threats to them, and guidance for developing conservation strategies that help maintain the genetic diversity and adaptive capacity of the species.

Regional species distribution and threat maps developed by APFORGIS will help:

- Identify centres of species diversity to optimise conservation efforts
- Assess how well the current protected areas cover the priority areas for conservation
- Identify areas where species populations may be most threatened by climate change
- Identify seed transfer zones and adequacy of existing seed sources for tree planting and forest restoration
- Plan studies on genetic diversity and provenance trials that are representative of the species' range and the variation in environmental conditions

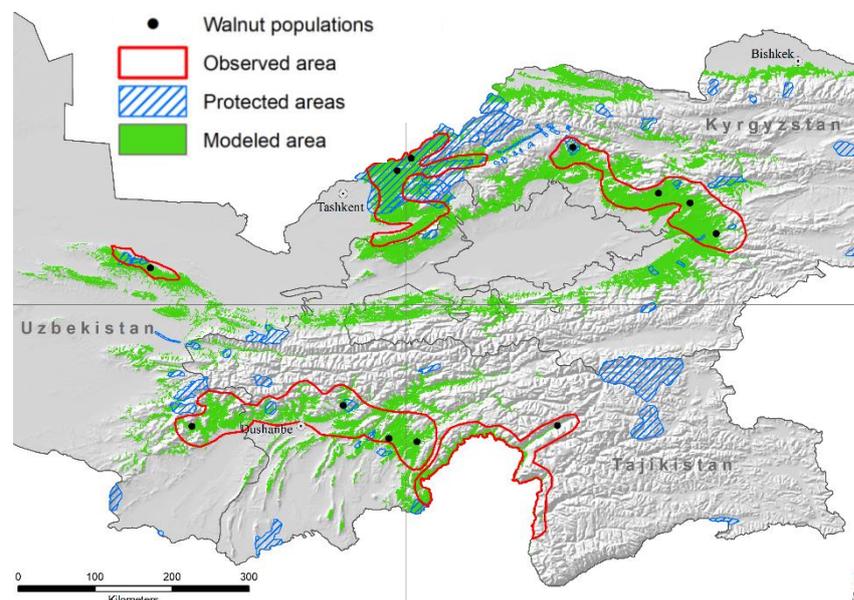


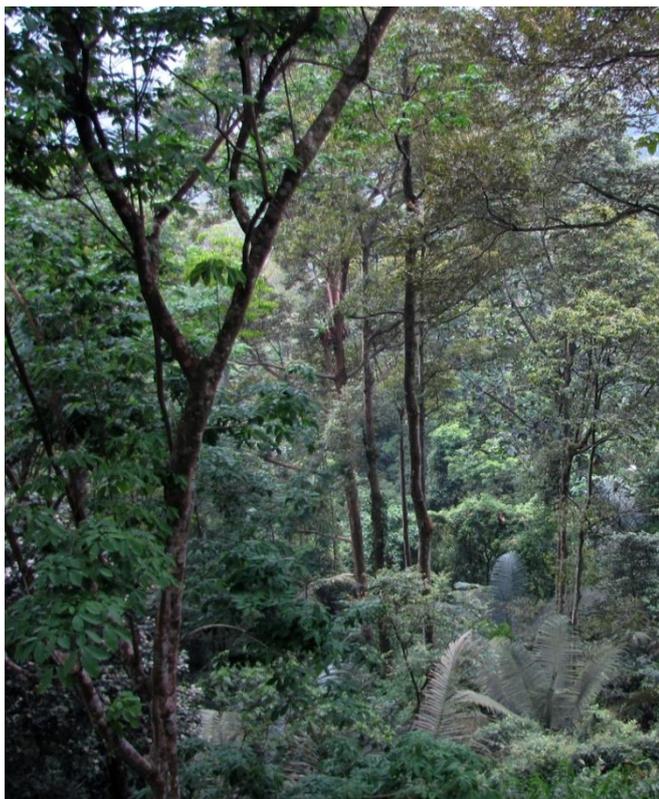
Figure 1. Distribution of wild walnut in Central Asia, according to species distribution modelling and expert validation. Source: H.Gaisberger, Bioversity International

Conservation and restoration strategies based on species characteristics

APFORGIS focuses on 50 socio-economically important pilot species which differ in their characteristics, uses and conservation status. Methods, tools and capacities developed can then be used by forest departments, research institutions and conservation organisations for other species of interest. Species list is available from www.apforgen.org/activities/apforgis/.

The project uses existing information about the species occurrences and threats to them for developing species distribution models. The models give an estimate of historical, current and potential future distributions. The resulting maps will be validated by experts and used for identifying conservation priorities. They can also be used to design and target field studies as a follow-up to the project.

Based on up-to-date information about the species distributions and threats to them, the project will develop guidelines for conservation units that maintain genetic diversity vital for the species survival, productivity and adaptive capacity. To be feasible and practicable, the guidelines will build on existing conservation approaches and initiatives in Asian countries. Areas readily suitable as conservation units will be identified, and gaps in their coverage regarding the species range and environmental gradients will then be assessed.



Regional collaboration will allow countries share information and responsibilities in establishing and managing genetic conservation units. Fewer units are likely needed than if every country set up its own network, which helps to focus and sustain efforts over time.

Partner with us

Do you or your organization have data about the natural occurrences of the pilot species of APFORGIS? Please help conserve these species and their genetic diversity by sharing information with the project!

In addition to species occurrence data, we are also looking for information on species reproductive biology, soil data, seed production areas, and spatial data on threats to species populations and on restoration initiatives.

As collaborator, you will:

- contribute to the conservation and restoration of Asia's valuable and threatened tree species
- be duly acknowledged for your role as co-author of the regional database, and other roles as relevant following an internationally developed framework; for example data curation, validation, writing of published work or funding acquisition.
- be invited to join the Regional Species Expert Group of APFORGEN
- receive information about regional workshops, trainings and other events
- have an opportunity to interact with a wide group of national, regional and international experts
- get insights on partnership opportunities for follow-up projects

Contact us to hear more about the opportunities to contribute and the project's principles for information sharing and acknowledgements.

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www.apforgen.org/activities/apforgis/
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