

# High value tree genetic resources diversity conservation and use paradox

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## Background

Imagine waking up one day and not being able to get a cup of your favourite coffee or tea, or even a chocolate bar! Why? Because all tree crops in farmers' fields have been destroyed and cannot be replaced! Breeding ensures that the quality and production of these tree crops is maintained.

Breeders require species diversity. However, tree crop diversity faces two major challenges: access and conservation.



## Access

Accessing diversity of tree species held in nature and in various national genebanks is hindered by global politics. International agreements on germplasm exchange need to be more effectively utilized to facilitate access to these diverse tree crop species.

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REVIEW

**Plant breeding and diversity: A troubled relationship?**

## Conservation

Diversity of these tree species in nature has been lost through deforestation and destruction of habitats. Most species have recalcitrant seeds that cannot be stored for long. Possible alternative methods of conservation are costly, among several other challenges.

SCIENCE ADVANCES | RESEARCH ARTICLE  
APPLIED ECOLOGY  
**High extinction risk for wild coffee species and implications for coffee sector sustainability**  
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Wild coffee species are critical for coffee crop development and, thus, for sustainability of global coffee production. Despite this fact, the extinction risk and conservation priority status of the world's coffee species remains largely unknown.



Coconut field destroyed by typhoon

## Possible solutions

- Develop and implement actions from global conservation and use strategies



- Utilize clear Access and Benefit Sharing arrangements to facilitate access to genetic resources
- Engage users such as the private sector (e.g., Mars, Nestle, Starbucks, Lipton) more actively in conservation

## Key references

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