

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA

Eighteenth meeting of the Conference of the Parties  
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## FRANKINCENSE IN PERIL

1. This document has been submitted by the United States of America in relation to agenda item 66.\*
2. The following recently published, peer-reviewed journal article provides additional scientific evidence as to the concerns about sustainable use, conservation status, and the impact of international trade on *Boswellia* species.

Bongers, F.; P. Groenendijk; T. Bekele; E. Birhane; A. Damtew; M. Decuyper; A. Eshete; A. Gezahgne; A. Girma; M.A. Khamis; M. Lemenih; T. Mengistu; W. Ogbazghi; U. Sass-Klaassen; W. Tadesse; M. Teshome; M. Tolera; F. Sterck; and P. Zuidema. 2019. Frankincense in peril. *Nature Sustainability*. 1. 10.1038/s41893-019-0322-2.

## Abstract:

The harvest of plant parts and exudates from wild populations contributes to the income, food security and livelihoods of many millions of people worldwide. Frankincense, an aromatic resin sourced from natural populations of *Boswellia* trees and shrubs, has been cherished by world societies for centuries. *Boswellia* populations are threatened by over-exploitation and ecosystem degradation, jeopardizing future resin production. Here, we reveal evidence of population collapse of *B. papyrifera*—now the main source of frankincense—throughout its geographic range. Using inventories of 23 populations consisting of 21,786 trees, growth-ring data from 202 trees and demographic models on the basis of 7,246 trees, we find that over 75% of studied populations lack small trees, natural regeneration has been absent for decades, and projected frankincense production will be halved in 20 yr. These changes are caused by increased human population pressure on *Boswellia* woodlands through cattle grazing, frequent burns and reckless tapping. A literature review showed that other *Boswellia* species experience similar threats. Populations can be restored by establishing cattle enclosures and fire-breaks, and by planting trees and tapping trees more carefully. Concerted conservation and restoration efforts are urgently needed to secure the long-term availability of this iconic product.

3. This has recently generated media attention, including the July 5 New York Times article, *Could this be the end of frankincense?*, available at:

<https://www.nytimes.com/2019/07/05/science/frankincense-trees-collapse.html>

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