

# Potential tree pest invasions Cuba-USA: Pest diversity, economic assessment of threat, and policy analysis

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The geographic proximity and ecologic similarities between Cuba and the South of the United States make it a region with high potential to exchange species with high invasive potential. Although, the reduced contact between Cuba and the United States in the last half century has diminished the risk of pest transmission between the two countries, research suggests that an increase in travel and trade would inevitable increase the risk of new introductions and establishments of plant pests for both countries. The poor relations between the two countries has also limited collaboration and coordination to attend, prevent and mitigate the possible exchange of plant pests. Being an island, the introduction of invasive species is one of the major threats faced by Cuba's biological diversity and food security. On the other hand Florida serves as a major point of entry for commerce making it especially susceptible to new pest invasions.

Wood borers account for more than half of all new forest insect invasions to the United States. In addition to the direct damage they inflict on plants, they also spread novel tree pathogens that can be highly damaging and for which there are no management tools. Introduced tree diseases vectored by wood borers have nearly eradicated a number of American tree species, including elms and redbays, posing a serious threat to ecosystems and their biodiversity. They are also increasingly impacting crops such as walnuts, avocados and mangos. If these species are introduced to Cuba the ecologic and economic impacts would be devastating. On the other hand there is little information of the woodborer species present in Cuba, and whether these species could be high risk if introduced to the US. As the United States and Cuba expand trade and commercial relations, both countries will face challenges and opportunities in terms of managing invasive pest threats, and monitoring, mitigating, and eradicating them as needed.

This project intends to establish a bi national research team that will identify woodborer species that can represent a risk if they are dispersed between the two countries. We aim to use a proactive approach by facilitating the exchange of information and experience, and by collaboratively documenting woodborer species with potential to become forest pests for either country, evaluating the potential economic impacts and assessing the effectiveness of prevention and mitigation policies. The project will provide the foundation for a well-established collaboration between experts in both countries, opening new opportunities for sharing data.