



## Resolution on the use of genetic technologies for invasive species control

Board of Directors' Resolution  
Revised 30 March 2021

**Whereas** our world's biodiversity is threatened by a mass extinction crisis; the greatest concentration of biodiversity, threatened species and species extinctions is on islands; invasive species are a leading cause of extinctions on islands and of biodiversity loss globally; invasive species also cause the degradation of island ecosystems, posing significant risks to island-dependent species, and adjacent marine environments including at-risk coral reefs; and invasive species threaten human communities on islands--their cultural practices, food security, livelihoods, and wellbeing;

**Whereas** there is hope to protect island biodiversity, near-shore marine environments, and human communities; there have been more than 1400 successful eradications of island invasive species to date; Island Conservation is the only global non-government conservation organization whose sole mission is to *prevent extinctions by removing invasive species from islands*; these interventions are recognized as one of the most cost-effective and beneficial actions to protect and restore island biodiversity;

**Whereas** today's eradication tools have characteristics that constrain the pace of, or altogether prohibit, such interventions in some locations and under some conditions;

**Whereas** emergent gene-editing technology allows us to contemplate alternative eradication intervention approaches such as introducing gene-drive modified organisms to remote islands to effect an 'eradication by expiration' of an invasive species through biased inheritance of traits such as maleness or infertility;

**Whereas** safe application of gene-drive modified organisms to remote islands holds promise as a transformative innovation to protect endangered and threatened species on hundreds of thousands of islands at a faster rate and lower cost basis than is currently attainable;

**Whereas** gene-drive modified organisms could potentially have irreversible effects on target and non-target populations, ecosystems, and food-security, they could be misused, and they raise many social, ethical, scientific, and ecological questions;

**Whereas** gene drives and genetically modified organisms are being debated, or opposed outright by some members of the public, organizations engaged in even the most cautious genetic research may be subjected to public scrutiny, opposition, and polarizing media coverage; and,

**Whereas** the US National Academy of Sciences (NAS) "...calls for a robust method to assess risks. A phased approach to testing, engagement of stakeholders and publics, and clarified regulatory oversight can facilitate a precautionary, step-by-step approach to research on gene drives without hindering the development of new knowledge...[and]...although there is insufficient evidence available at this time to support the release of gene-drive modified organisms into the environment, the likely benefits of gene drives for basic and applied research are significant and justify proceeding with laboratory research and highly-controlled field trials..."<sup>1</sup>;

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<sup>1</sup> NAS (2016); [Gene Drives on the Horizon; Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values](#)

**Therefore, be it resolved** that Island Conservation is compelled to cautiously investigate the feasibility and suitability of gene-drive modified organisms for eradication of island invasive species. After careful review of the issues, Island Conservation concludes that the potential for this transformative innovation outweighs the current risks associated with such an investigation, including any reputational risks; and,

Consistent with NAS recommendations for assessing feasibility and risks, we support a cautious, step-wise investigation that includes extensive engagement of stakeholders from the outset to evaluate biological, social, and ethical risk, and that engages governments with the most advanced environmental regulations to consider highly controlled field trial(s) only within the most robust regulatory frameworks.

Island Conservation's strategic vision is to dramatically increase the scale, scope, and pace of island invasive species eradications in order to maximize beneficial impacts for biodiversity and marine conservation, and for island communities' sustainable development goals. As such, we support an investigation committed to facilitating maximum public benefit of any intellectual property or technology developed while simultaneously committed to preventing any unintended uses.

Island Conservation's Board will appoint Board liaisons who will advise the Board about the investigation on a regular basis. The decision of whether Island Conservation will, or will not, participate in the pursuit of an application seeking authorization of a highly controlled field trial will be a Board decision. Only trials consistent with the guidelines herein will be considered; and a decision will be made only after the Board has solicited and considered the advice of both staff and a diverse set of science-based opinions on the safety of the field trial.

*~End~*

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<sup>2</sup> Genetic Biocontrol of Invasive Rodents Consortium ([www.geneticbiocontrol.org](http://www.geneticbiocontrol.org))