

# MPA NEWS



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## MPA Science Corner: Hydroacoustics as a cost-effective tool - Marine reserve effectiveness - Evaluating MPA networks

These recent articles on MPA-related science and policy are all free to access.

**Article:** "[Hydroacoustics as a tool to examine the effects of Marine Protected Areas and habitat type on marine fish communities](#)", *Scientific Reports* 8 (2018)

**Finding:** This study uses a novel method – hydroacoustics – to compare fish abundance inside and outside MPAs. Acoustic estimates of fish biomass over reef-specific sites did not differ significantly from those estimated using underwater visual censuses. This suggests hydroacoustics could provide a new, more cost-effective method of assessing fish populations and MPAs.

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**Article:** "[A user-friendly tool to evaluate the effectiveness of no-take marine reserves](#)", *PLOS ONE* 13, e0191821 (2018)

**Finding:** This study presents a new framework and tool, MAREA, to evaluate the effectiveness of no-take marine reserves, including across ecological, socioeconomic, and governance objectives. MAREA is described as a free, simple, and replicable way to perform rigorous impact analysis, and is useable by managers and stakeholders.

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**Article:** "[Measuring progress in marine protection: A new set of metrics to evaluate the strength of marine protected area network](#)", preprint via MarXiv (2018)

**Finding:** This study proposes a set of metrics to evaluate the effectiveness of MPA network structure compared to an optimally designed network for the protection of vulnerable habitats and species. The metrics combine properties of effective individual MPAs with metrics for their capacity to function collectively as a network.

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