

Toward a national eDNA strategy for the United States

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ABSTRACT

Environmental DNA (eDNA) data make it possible to measure and monitor biodiversity at unprecedented resolution and scale. As use-cases multiply and scientific consensus grows regarding the value of eDNA analysis, public agencies have an opportunity to decide how and where eDNA data fit into their mandates. Within the United States, many federal and state agencies are individually using eDNA data in various applications and developing relevant scientific expertise. A national strategy for eDNA implementation would

capitalize on recent scientific developments, providing a common set of next-generation tools for natural resource management and public health protection. Such a strategy would avoid patchwork and possibly inconsistent guidelines in different agencies, smoothing the way for efficient uptake of eDNA data in management. Because eDNA analysis is already in widespread use in both ocean and freshwater settings, we focus here on applications in these environments. However, we foresee the broad adoption of eDNA analysis to meet many resource management issues across the nation because the same tools have immediate terrestrial and aerial applications.

KEYWORDS

environmental DNA, federal, genetic, implementation, management, natural resources, policy

Full Text:

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