



Conference Abstract

Developing DNA Based Methods for Environmental Regulation and Management- UK Insights

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Abstract

DNA assessments are revolutionising biomonitoring opportunities across the globe, including the monitoring of rare and invasive species, creating biodiversity inventories, and developing pollution diagnostic and ecosystem resilience assessment methods. To date pollution and ecosystem resilience assessments have been based on assessing the diversity of familiar taxonomic groups but the introduction of DNA based methods will significantly increase the opportunities to exploit groups not previously used for this work.

Environmental regulators and managers can derive many benefits from the adoption of these methods, such as improved understanding of environmental conditions, cost effective sample processing, overcoming taxonomic bottlenecks, either through shortages in trained taxonomists or utilising biota with challenging taxonomies. In addition to creating diversity based metrics DNA monitoring also allows for the assessment of functional attributes such as those that support important ecosystem services.

The UK has been an early adopter of this technology and this paper will explore how the alignment of scientific advances have coincided with operational needs to create a fertile arena for the development of DNA based assessment methods that will be used in environmental regulation and management. Development projects advanced in the UK will be examined to identify the common and specific issues associated with them that have led to early engagement and adoption.

Keywords

UK environmental regulation, Monitoring, DNA assessment methods

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