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# Are otoliths effective environmental monitoring tools for coastal zone management?

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The use of fish otoliths to detect and monitor anthropogenic disturbance to coastal environments is underdeveloped. Chemical analysis of otoliths can help to establish baselines in pollution monitoring, especially when historical samples are included. A study of Brosme brosme otoliths revealed significant uptake of lead in areas adjacent to industrial sites compared to remote sites, and further sampling will be used in combination with other biomarkers to monitor effects of mining and dumping of tailings in coastal areas.
Otolith shape analysis and screening can reveal mixing of local populations and trace movements of aquaculture escapees. Otoliths retrieved from fish that are taken by angling could form the basis for a citizen science network in monitoring programmes important to local authorities.

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