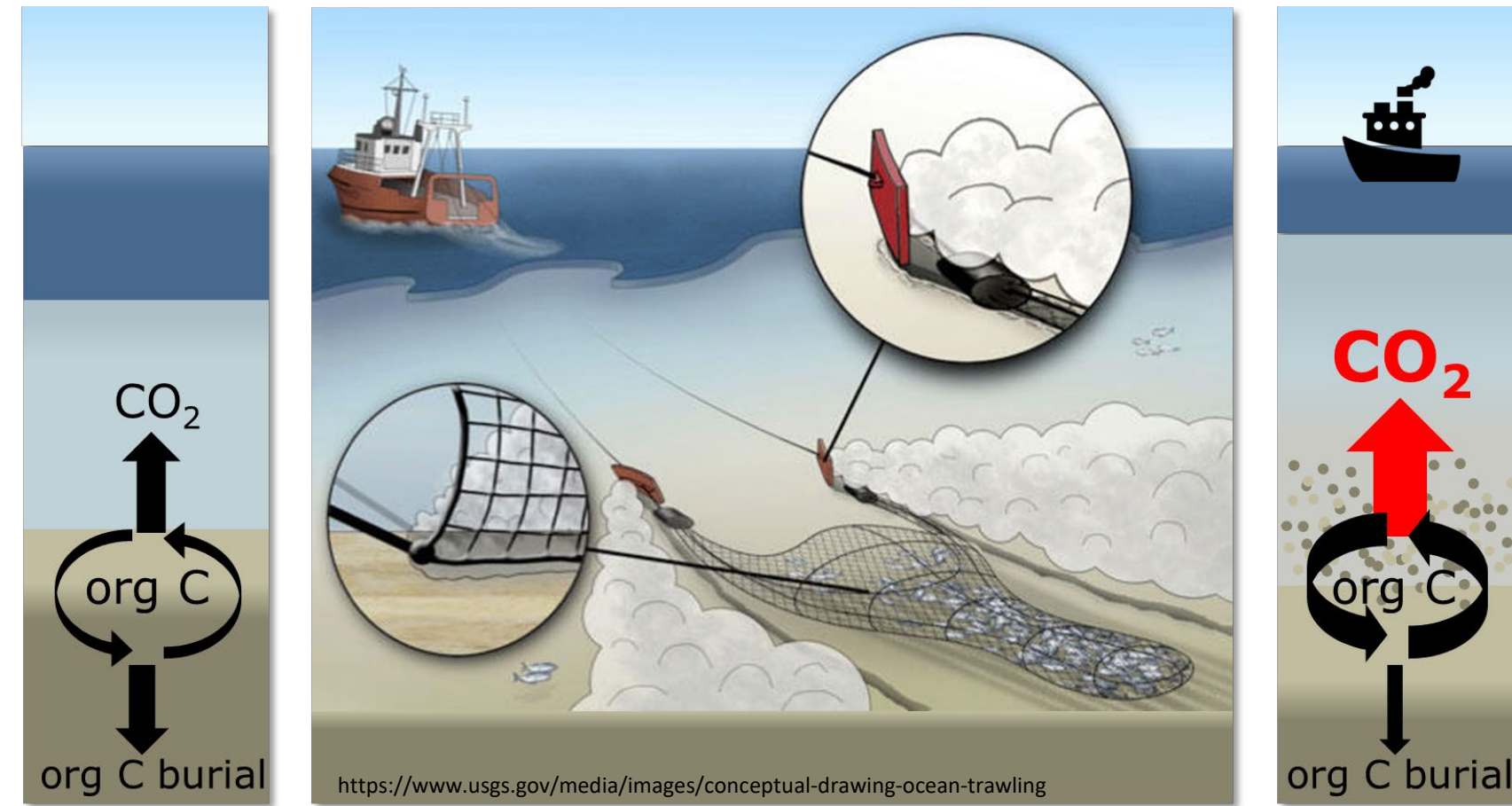


Simple tool quantifying sediment resuspension effects on marine organic carbon storage

Seafloor plays pivotal role for Earth's climate by storing organic carbon long-term.¹

Resuspension enhances mineralisation of stored organic carbon to CO₂.²

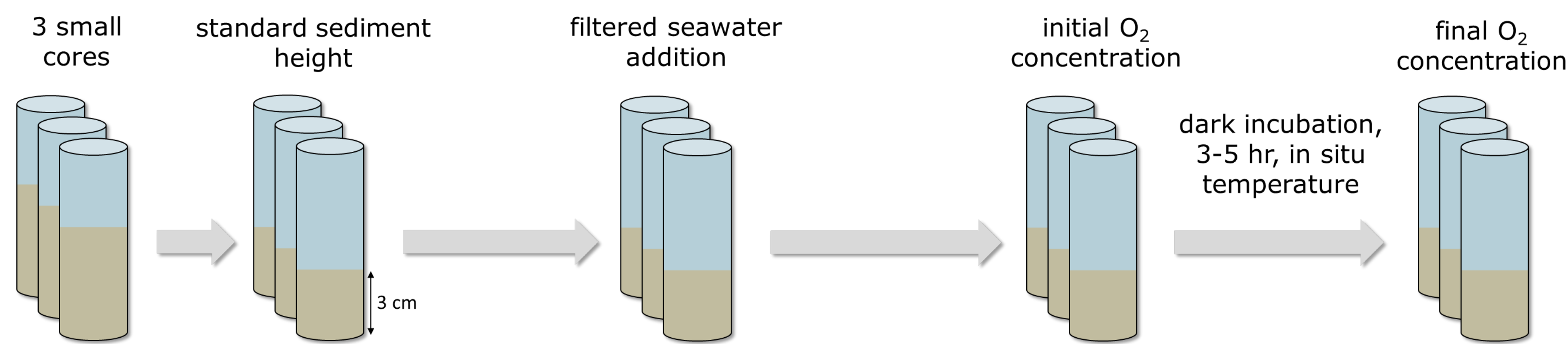


Global trawling CO₂ footprint estimations³ lack

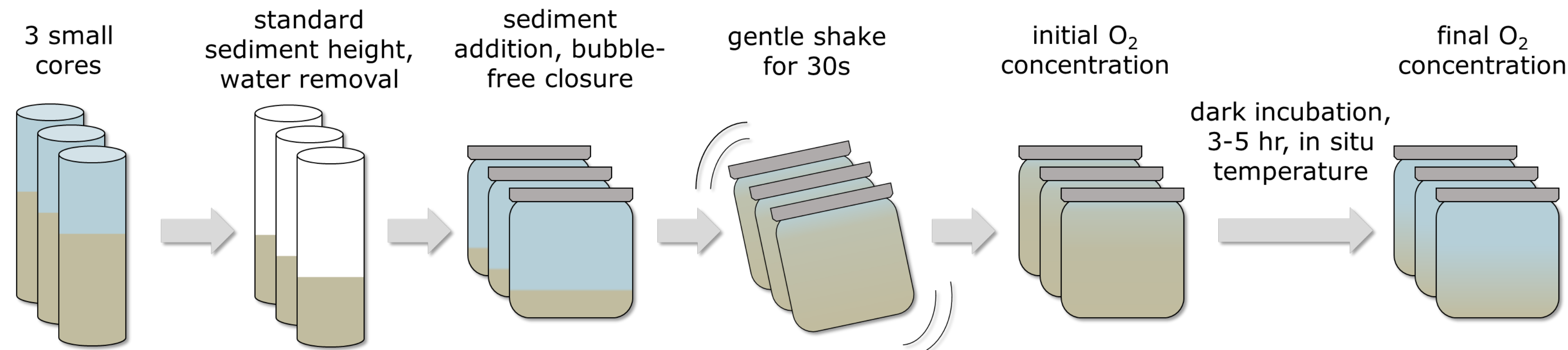
- measurements of resuspension effect on org. C mineralization rates⁴
- accountancy for spatial variation of sediment types/ habitats⁵

The Resuspension Assay

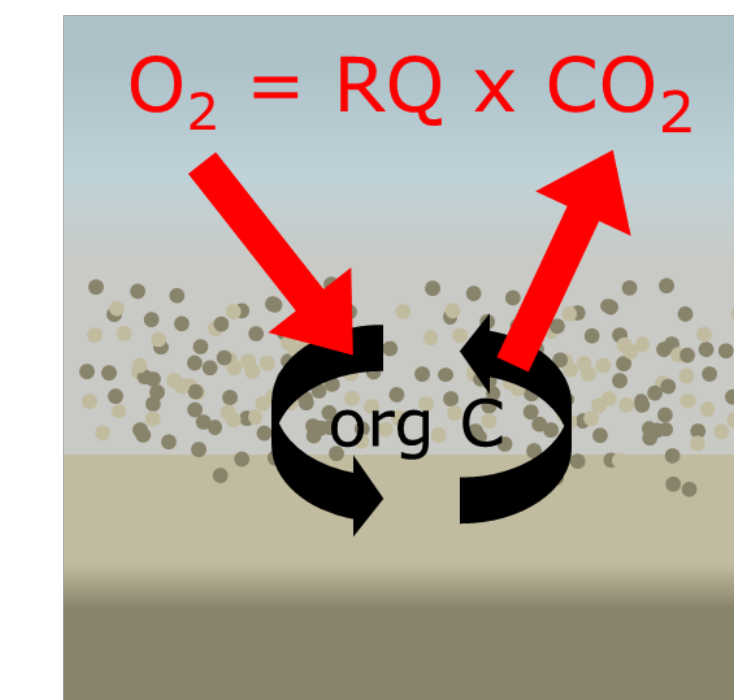
UNDISTURBED CORE



RESUSPENSION TREATMENT



Resuspension-induced CO₂ production



Respiratory quotients (RQ)⁶:

- 0.90 for inner shelf
- 0.85 for outer shelf
- 0.80 for slopes
- 0.75 for deep sea

A rapid and efficient solution for integrating sediment heterogeneity in resuspension and C storage assessments.

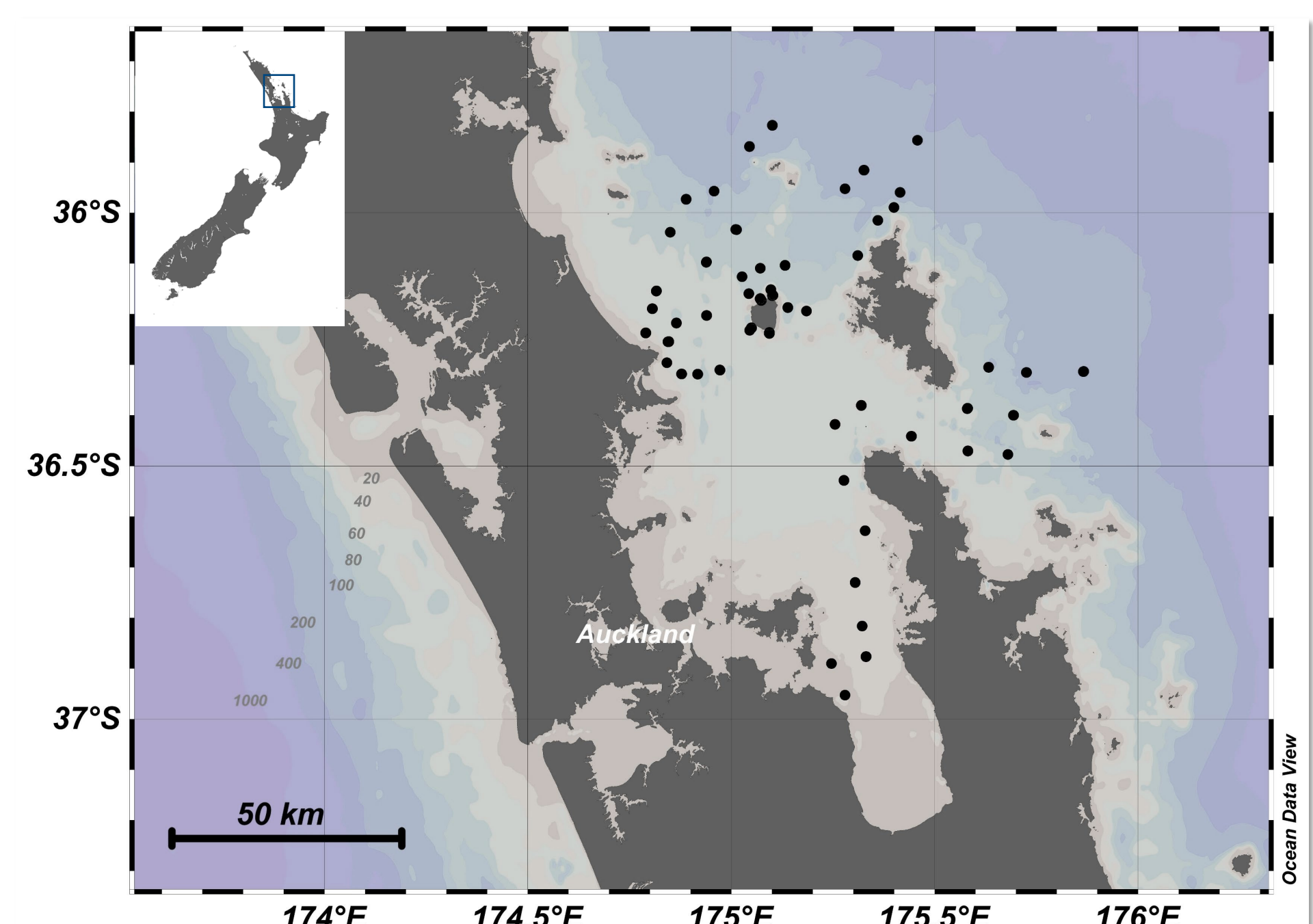
Simple → based on BOD method⁷

Rapid → short incubations of 3-5 hrs

Efficient → 7-8 sites per day in 50 km radius

Affordable → inexpensive equipment

What's next? Identifying vulnerability of Hauraki Gulf sediments to demersal fishing.



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