Salt marsh stability is key to ensure provision of ecosystem services

- resistance to erosion
- increase in surface elevation at a rate commensurate with sea-level rise

Resistance to erosion

- surface resistance
- resistance at marsh edge

Geotechnical methods have been used in other environments to assess shear strength of soils
Methods to characterise shear strength

• Shear Box tests
  - Undisturbed sample
  - Determines peak shear strength

• Ring shear tests
  - Remoulded
  - Without roots
  - Determines residual strength (strength retained post-failure)
Reduction in strength between peak and residual scenarios

• Shear box and ring shear tests: allow quantification of shear strength properties of salt marsh and tidal flat substrates
  - Behaviour type (brittle/ductile)
  - Shear strength for given normal load

• Difference between strength for a given normal stress for the peak scenario (A) and residual scenario (B) may partly reflect the role of roots