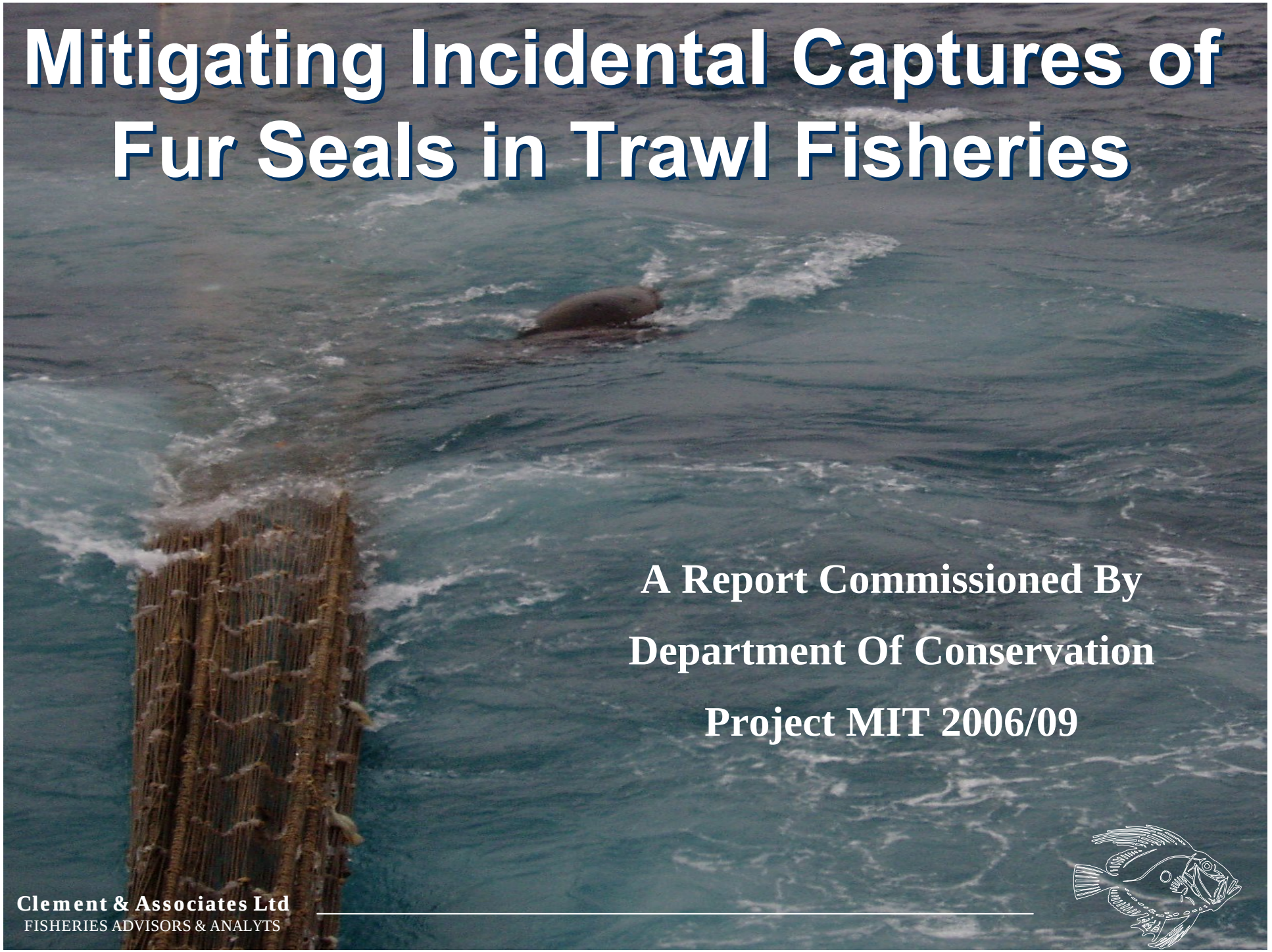
Mitigating Incidental Captures of Fur Seals in Trawl Fisheries



A Report Commissioned By

Department Of Conservation

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Objectives

- Develop method to reduce fur seal captures in trawl nets
- Test most promising method

Nature of Problem

- Fur seals attracted by easy food (video)
- Have become a part of fishing operation
- Risk capture in trawl, especially during shooting and hauling
- Variability in behaviour (time and place)

First Steps

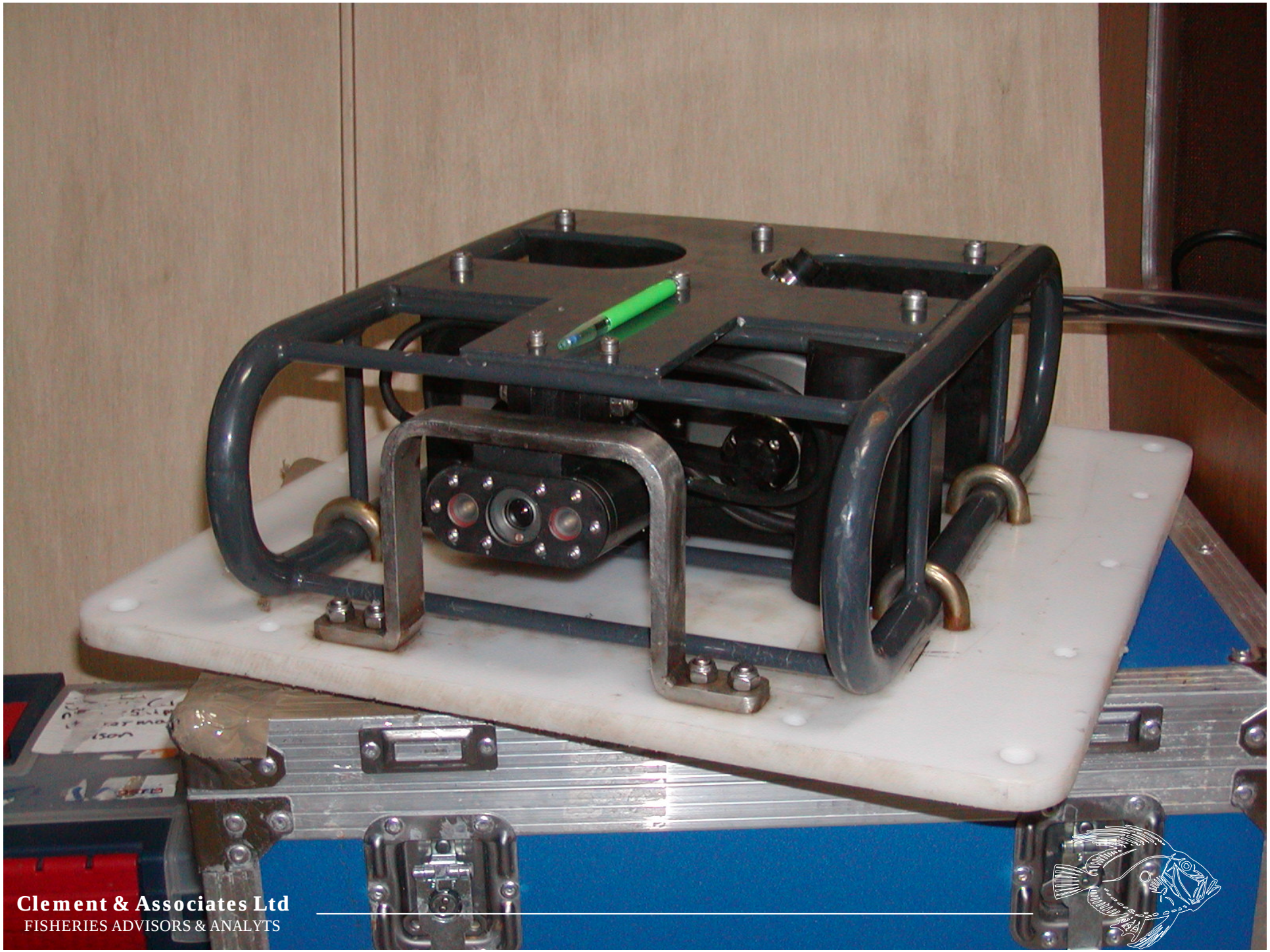
- Characterise vessel operations
- Desktop review of options
- Develop trials based on this work

SED Trials

- SED chosen as most promising option
- Built to New Zealand sea lion exclusion device specifications with narrower grid bar spacing (17 cm vs 23 cm)

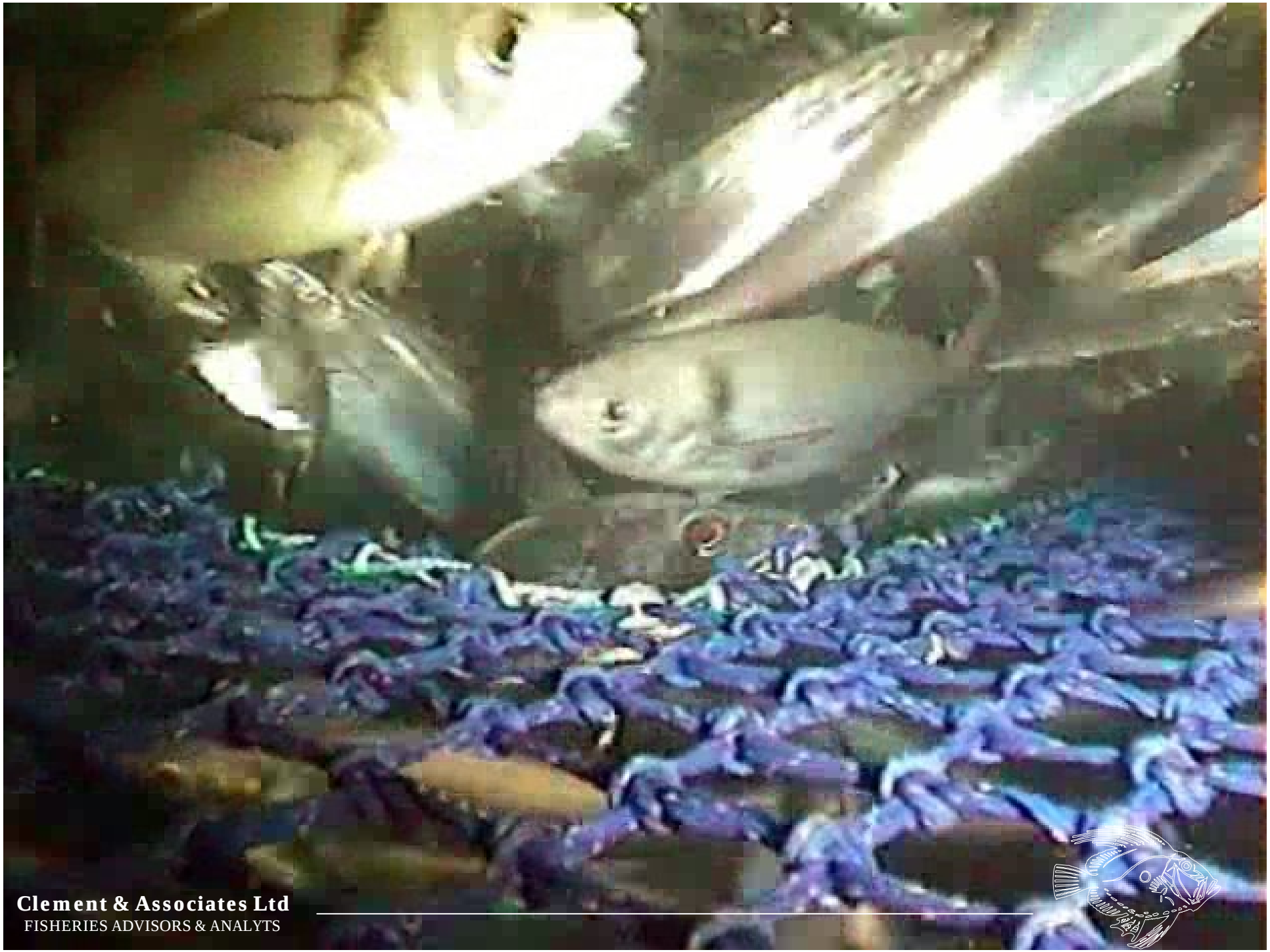
SED Trials cont

- Trial set for hoki fishery on commercial vessel using normal gear configuration
- Camera-based observations



First Trial Results

- Hoki season with high catch rates
  - Initial set up problems sorted
  - High levels of fish escapement (video)
  - No fur seal interactions recorded in trawl



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Second Trial Results

- "Off" season hoki with low catch rates
  - Escape hole closed
  - Level of fish impacts ≈ 50% (video)
  - No fur seal interactions recorded in trawl
  - By-catch congesting grid (video)

Issues

- Relationships between water flow and target finfish behaviour in SED appear different to squid fishery

- Probably caused by a combination of effects:
  - Gear size
  - Grid bar spacing
  - Fish swimming capability and congestion at grid face

Issues cont

- Potential unmeasured effect on fish quality (video)
- No fur seal interactions recorded despite frequent attendance at vessel