

Demand-based science for coastal management in a Marine Protected Area and upwelling region

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A - Scientific Researches Report's Synthesis



- Marine Extractive Reserve (1997)
- Utilization Plan (1999)
- Deliberative Council (2010)
- Most visited MPA in Brazil (ICMBio, 2018)
- Management Plan (2018+)
- Sustainable Use Federal Unit
- Researches need approval and report submission (Sisbio)
- Underused report's database
- Report:
 - Taxon X sampling site
 - Results/discussion
 - Management recommendations
- Synthesis:
 - 2008 – 2017
 - One report per license
 - 159 scientific research licenses

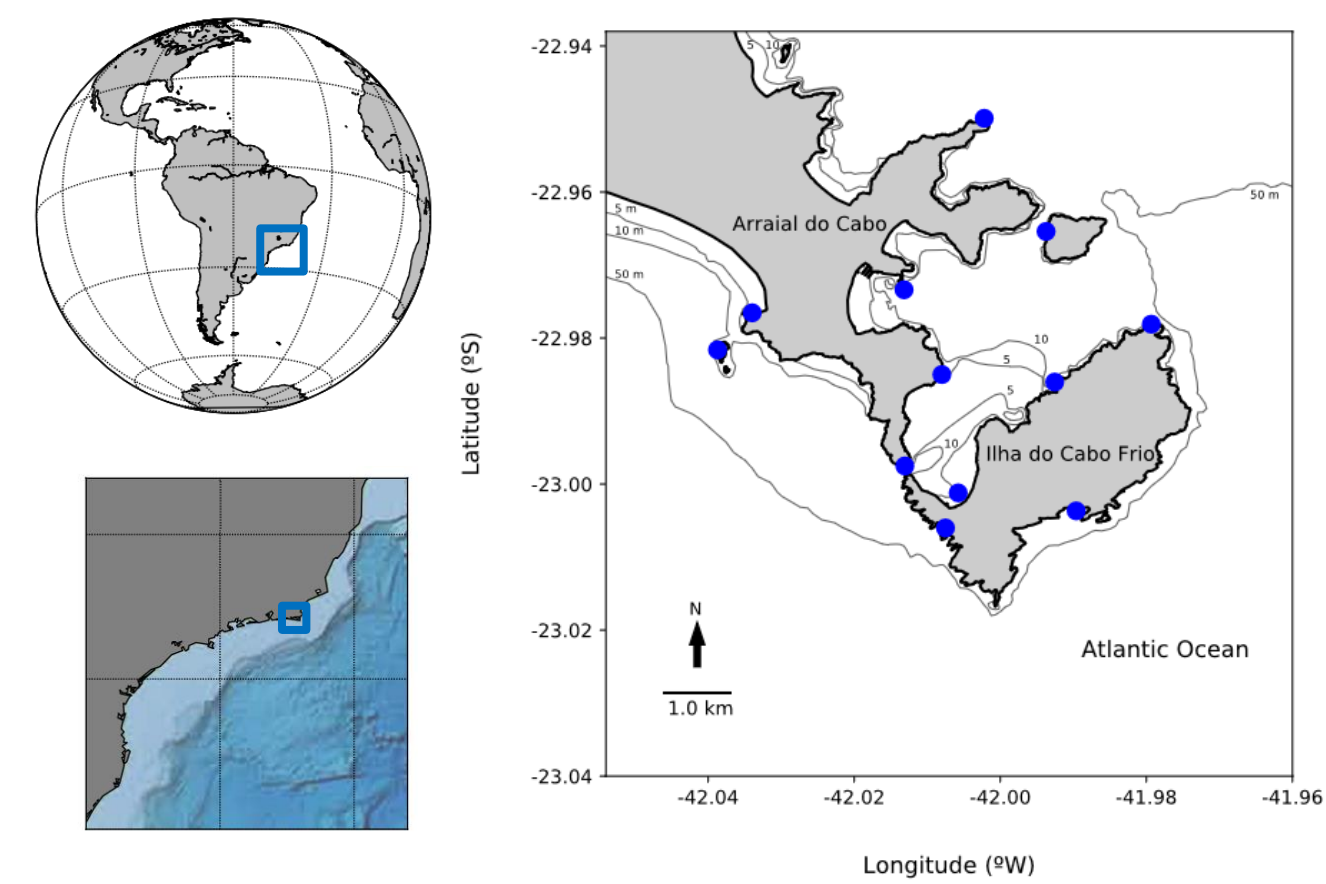
- Results:
 - 47% useful reports
 - 60%+ ecological studies
 - Region's Descriptive information
 - Taxons checklist
 - 234 species
 - 20 exotics
 - 19 endemics
 - 2 CR and 2 EN (IUCN red list)
 - Priorities:

Citations rank	Fiscalization	Monitoring	Impacts	Future researches
1	Fisheries	Exotic species	Fisheries	Exotics species
2	Tourism	Cryptogenic ascidians	Urbanism	Impacts
2	-	Sun-coral	-	Cetaceans

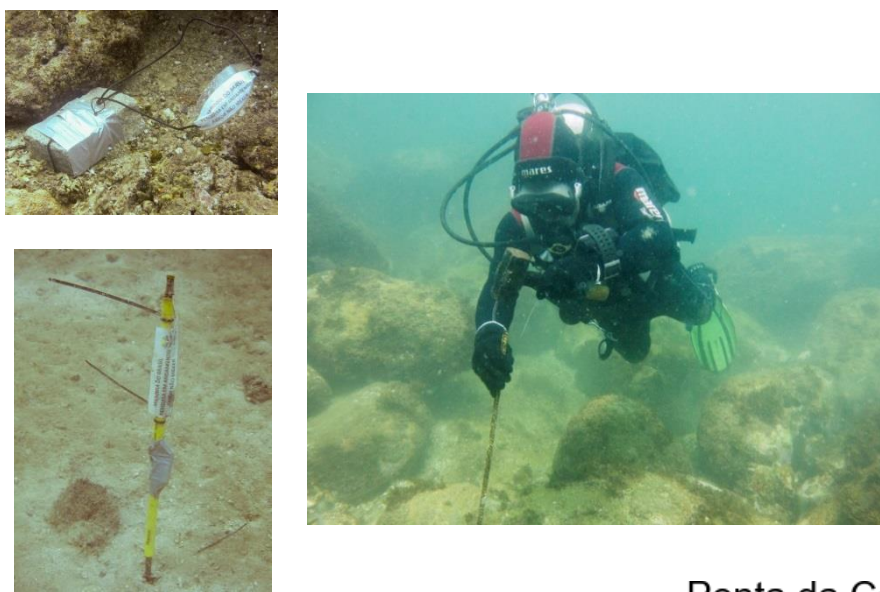
B – Oceanographic processes and biological features

Sea temperature monitoring

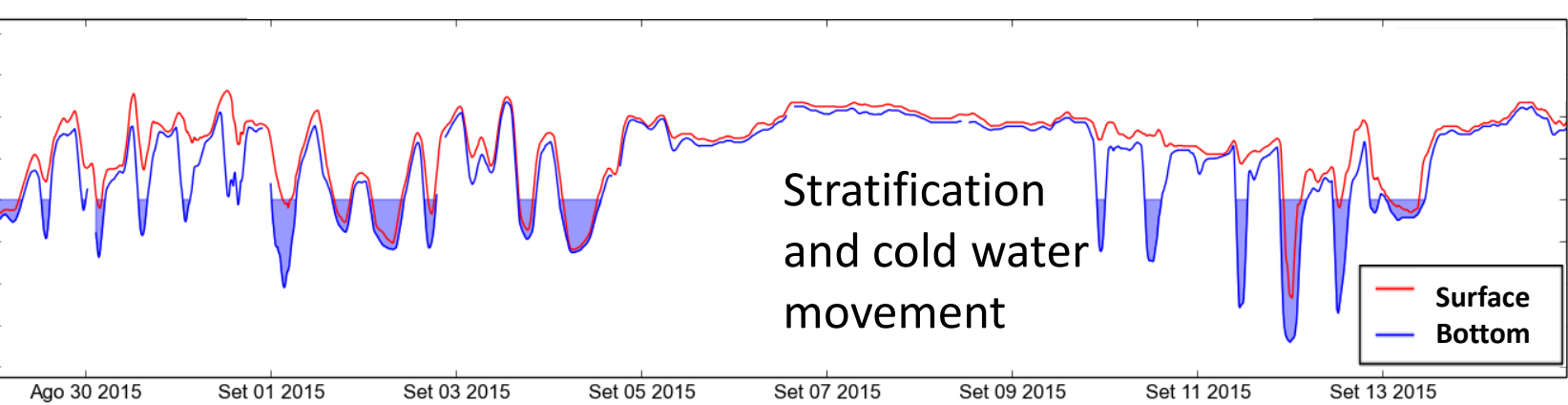
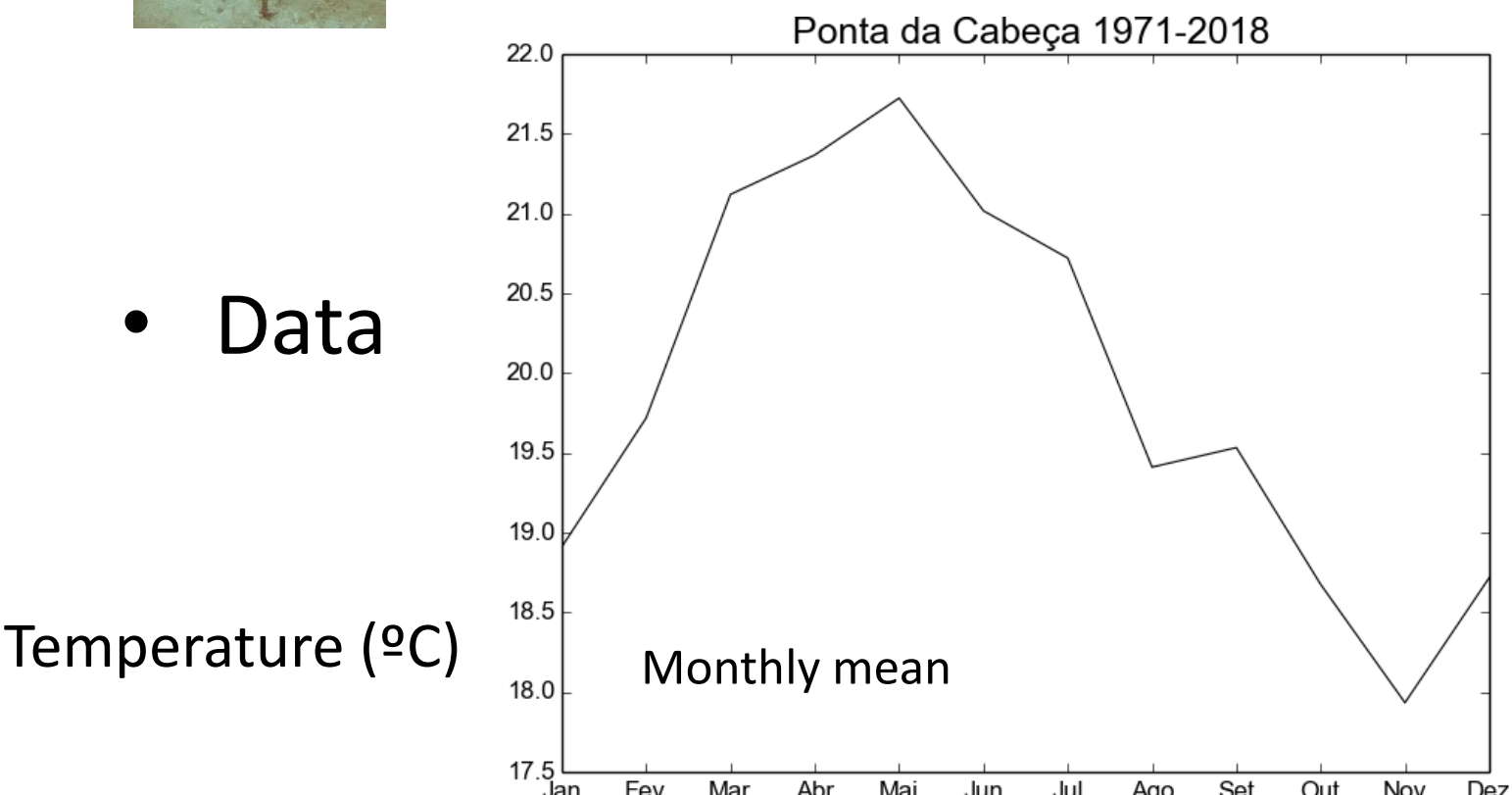
- Dataloggers



- Two depths scuba instalation

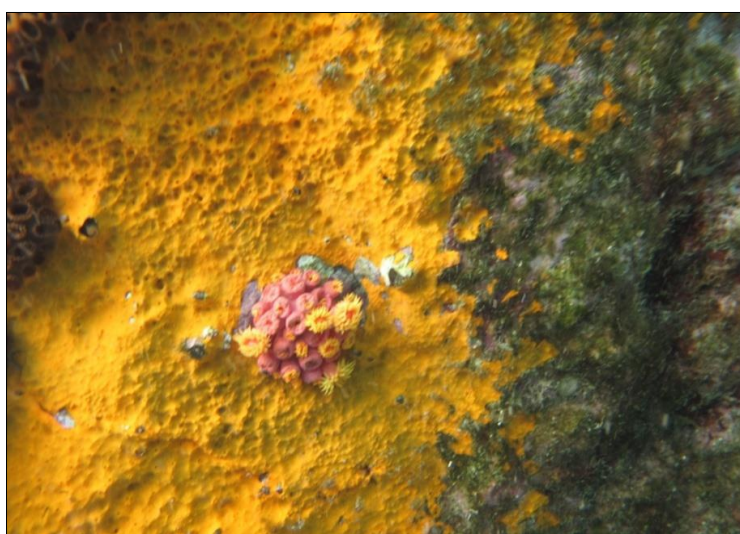


- Data

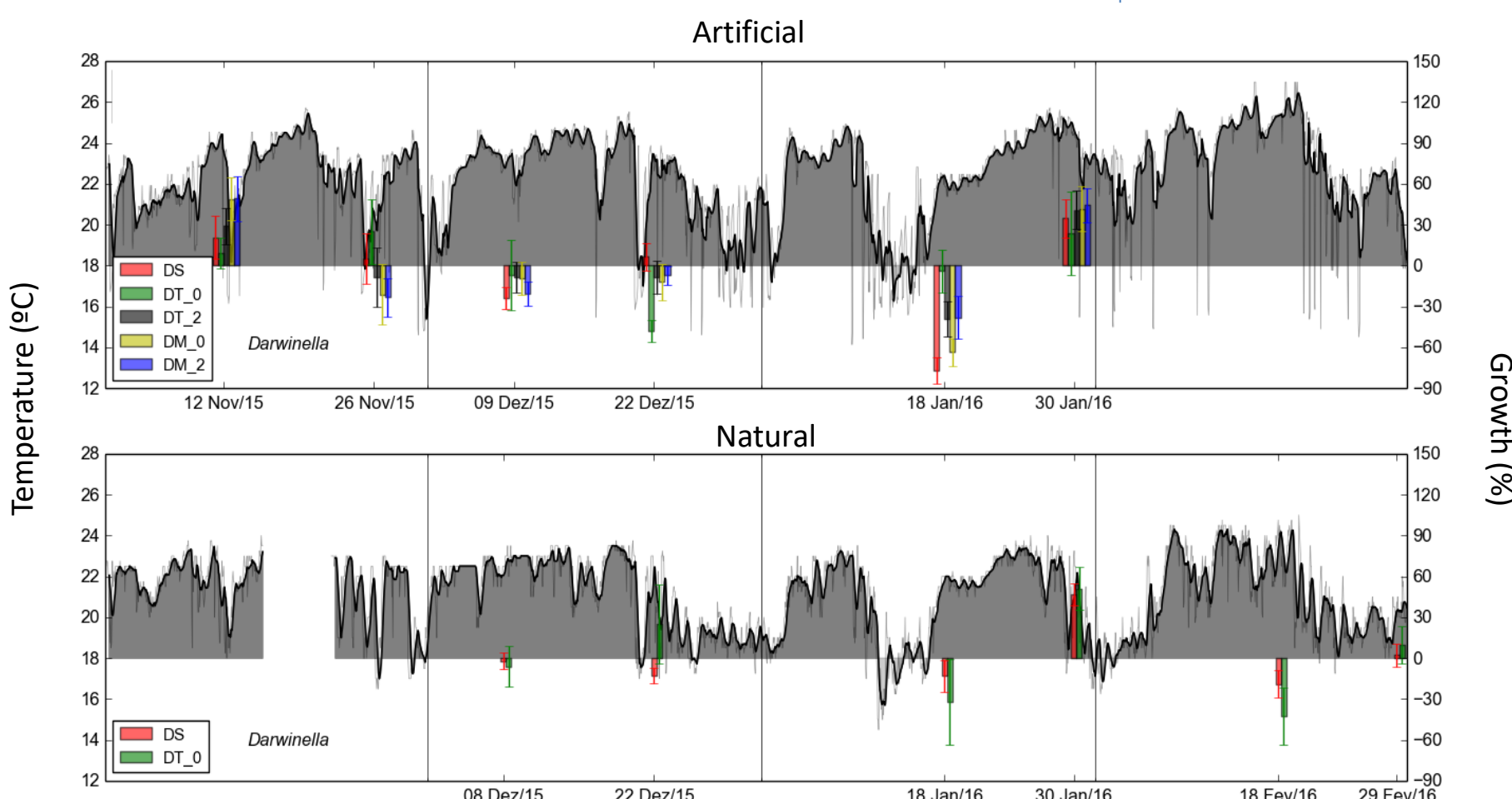


Temperature effects on bioinvasion

- *Darwinella* sp. (sponge)
 - Cosmopolitan and cryptogenic
 - Commonly found near sun-coral
- Sun-coral *Tubastraea coccinea*:
 - Invasive since 80's

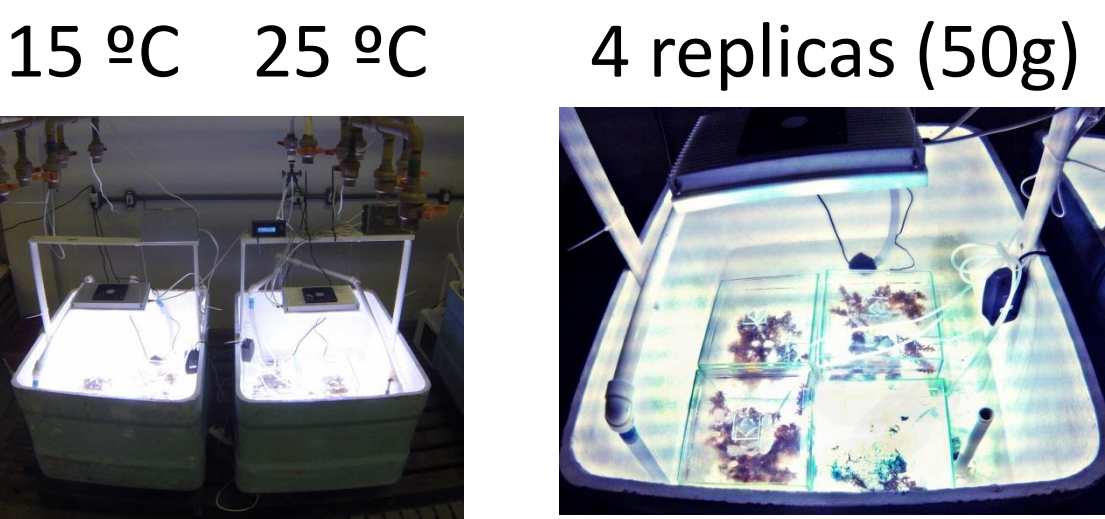


- Manipulative field experiment:
 - Competitive interaction
 - 3 months weekly photos
 - Artificial plates
 - Sun-coral crude extrate
 - Natural subtrate
 - ↓ T°C → - growth



Temperature effects on ecological chemistry

- *Sargassum furcatum* seasonal bank
- Laboratory experiment:
 - Constant light (~180 μmols)
 - 18 days



- Extracts in preparation
- Chemical profile in HPLC

