Advancing coastal cross-realm integration for planning and assessment

Linda Harris, Mariel Bessinger, Anisha Dayaram, Stephen Holness, Stephen Kirkman, Tamsyn Livingstone, Amanda Lombard, Melanie Luck-Vogel, Kerry Sink, Andrew Skowno, Lara van Niekerk
Valuable national asset

- Coastal protection
- Subsistence harvesting
- Health and well-being
- National economy
- Supplementary livelihoods
- Unique biodiversity
Progress through the NBAs

Map symbols

*Ngasp!

12 ecosystem types

Boundary Improvement (but still not perfect)
The coast mapping mess

Vegetation
Sandy beach
Estuary
bit's don't align
Vegetation
Need a fine-scale coastal ecosystem-type map that is seamless among realms
Zipping up the coast

Tinley 1985 Coastal dunes of SA

McLachlan et al 1984 MEPS 16: 51-63
Zipping up the coast

Vegetation

Backshore

Tinley II/III
(Scrub/Thicket)

Back of the surf

Inner shelf

Shore

Dune base

SEASHORE
What about estuaries?
Backshore

Replaces shapes for the 4 seashore veg types

Frontal

Parabolic

Transgressive

Barrier

EISH!
Changes to shore types

1. If there is evidence from provincial map or imagery (Google, SPOT, etc) that a portion of the shore has rocks that are temporarily exposed, and the shore habitat type is classed as sandy, it is changed to mixed.
   a. EXCEPTION: if rocks exist alongshore for not longer than what the beach is wide, then the sandy shore habitat type is retained.
   b. EXCEPTION: Provincial broken and scattered rocks in the low shore, with no supporting image for rocks otherwise, becomes sandy
   c. EXCEPTION: No supporting imagery for Provincial classification, and local knowledge confirms a different category (e.g., the rocks at Black Rock)

2. The shore opposite the estuary mouth (as per the floodplain shapefile) becomes “Estuarine Shore”, and overrides national and provincial classifications. (Biogeography sensu estuarine realm?)

3. In cases where there is a beach morphodynamics type conflict between provincial and national maps, the beach morphodynamic type will be reassessed by Linda.

4. Provincial needs to add in national rocky shore types into their classification.

5. Features must be mapped as the pre-transformed state, and we report on *impacts
Dynamic ecosystem types
The big reveal...

This page is not intentionally left blank.
The coast mapping mess

- Sandy beach
- Estuary bits don't align
- Vegetation
The seashore zip
Let’s zoom in...
inland aquatic

estuary

terrestrial

marine
The Coast
What does this unlock for us?

• Coastal ecological infrastructure
• Integrated, cross-realm planning
• Coastal and marine CBA map
Thank you

Dr Linda Harris
harris.linda.r@gmail.com