



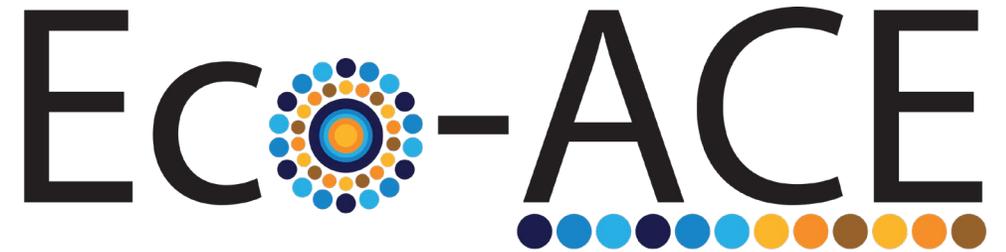
Building adaptive capacity to ocean change by promoting ecosystem-based adaptation and community engagement



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Ecosystem-based adaptive capacity through community engagement



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Background to the Eco-ACE project

- South African marine-dependent communities are vulnerable to the impacts of anthropogenic environmental change; vulnerable groups such as women are even more so.
- Conventional management approaches do not always help coastal communities as they do not meaningfully involve people who rely on the ocean for a living.
- Limited implementation of systems-based approaches to management exacerbates communities' day-to-day challenges, further eroding adaptive capacity.
- To address challenges requires diverse, transdisciplinary approaches at multiple scales.



Local Capacity Building

Build capacity at local level through co-design and collaboration and at regional and national decision-making levels through collaboration.



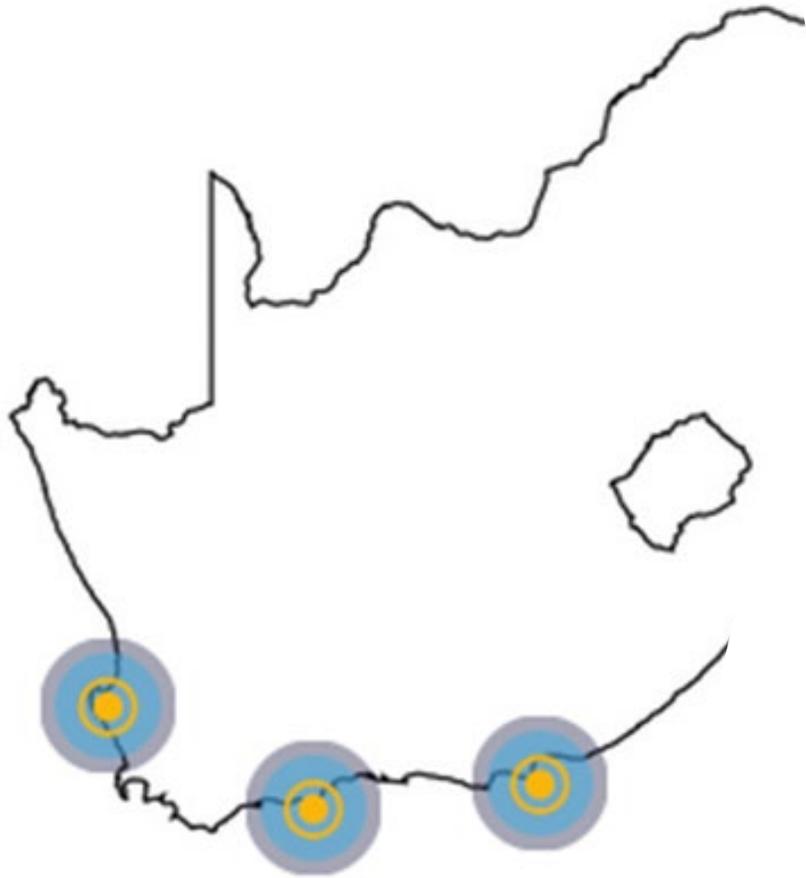
Knowledge Integration

Integrate social and ecological knowledge into ecosystem models.



Facilitate Communication

Facilitate science and stakeholder engagement and communication interventions with regard to anthropogenic climate change and long-term natural variability.

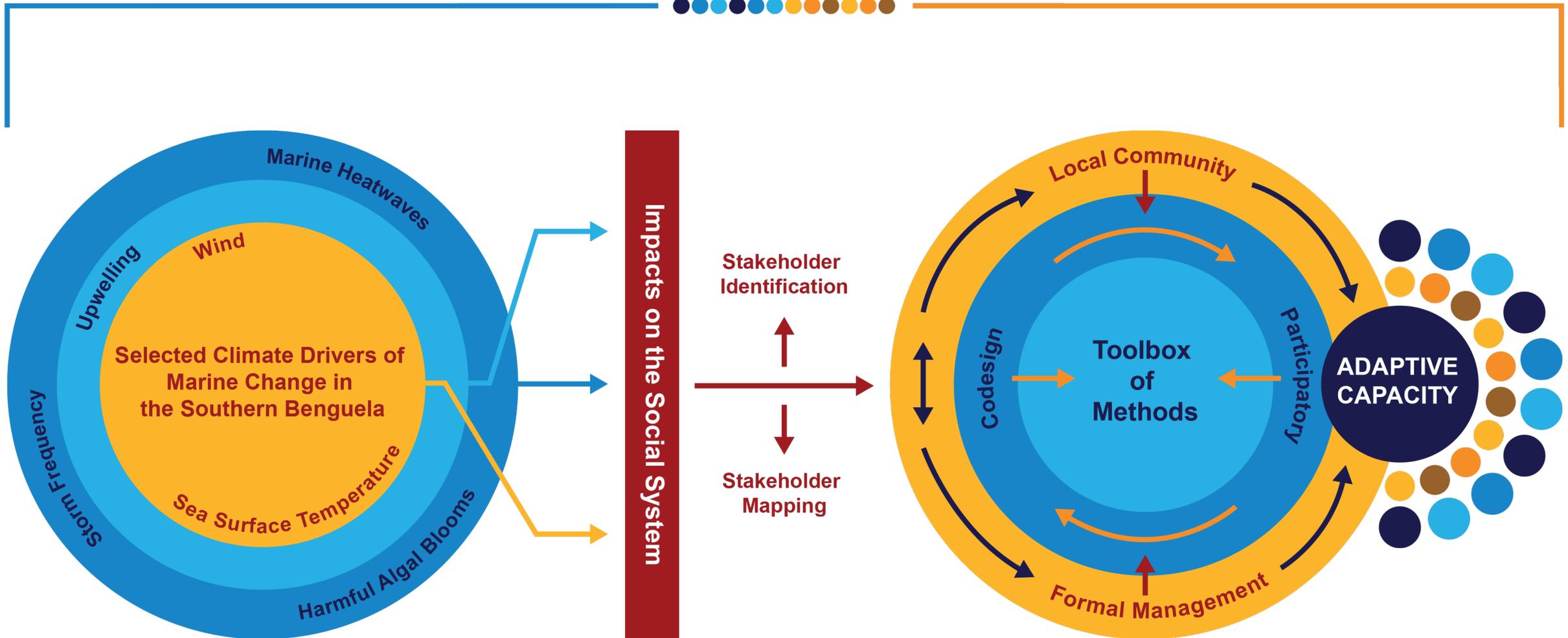


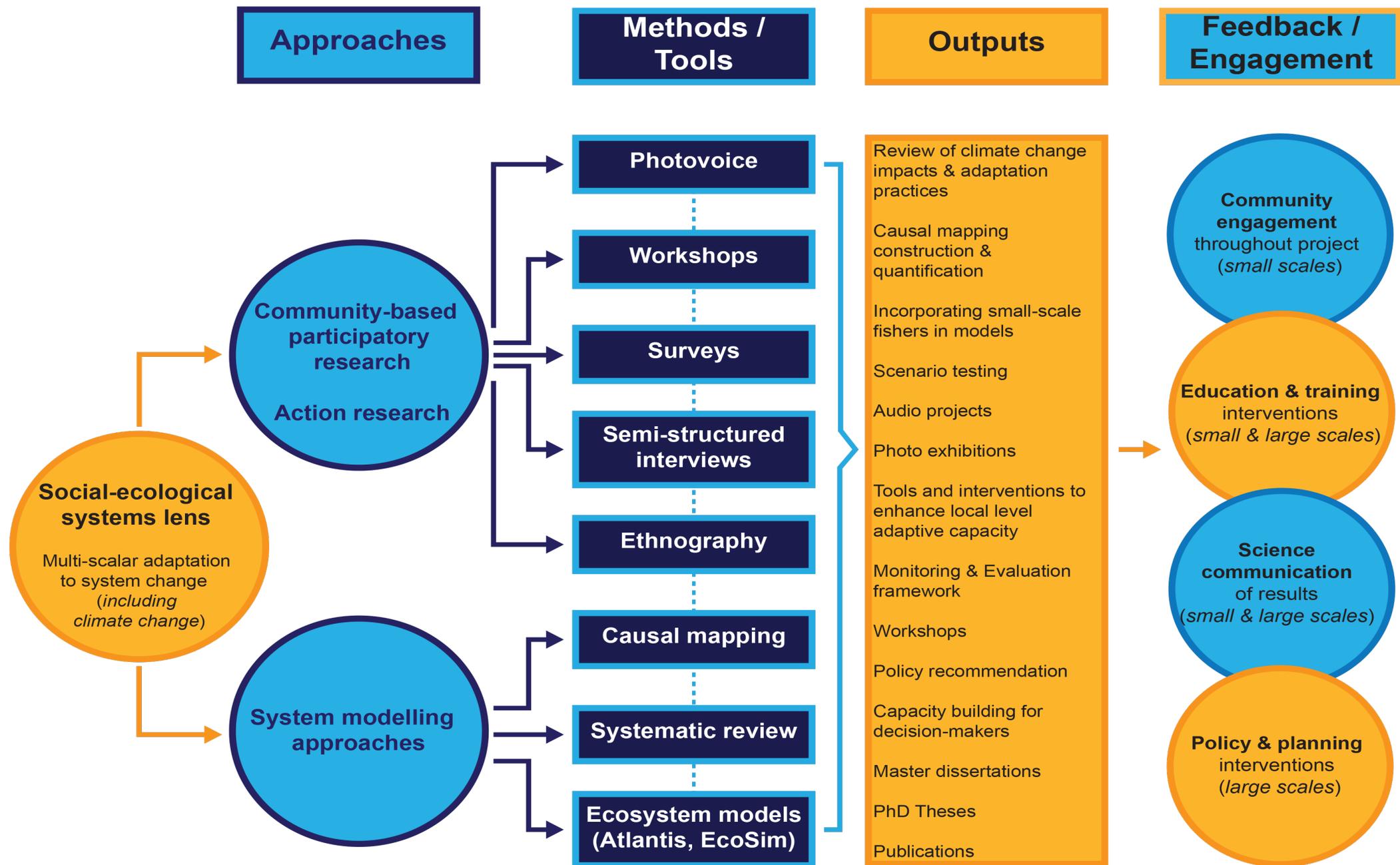
Where do we work?

Our project works in three South African coastal communities in the southern Benguela:

- St Helena Bay (Western Cape)
- Melkhoutfontein (Western Cape)
- Blue Water Bay (Algoa bay) (Eastern Cape)

Social-Ecological System

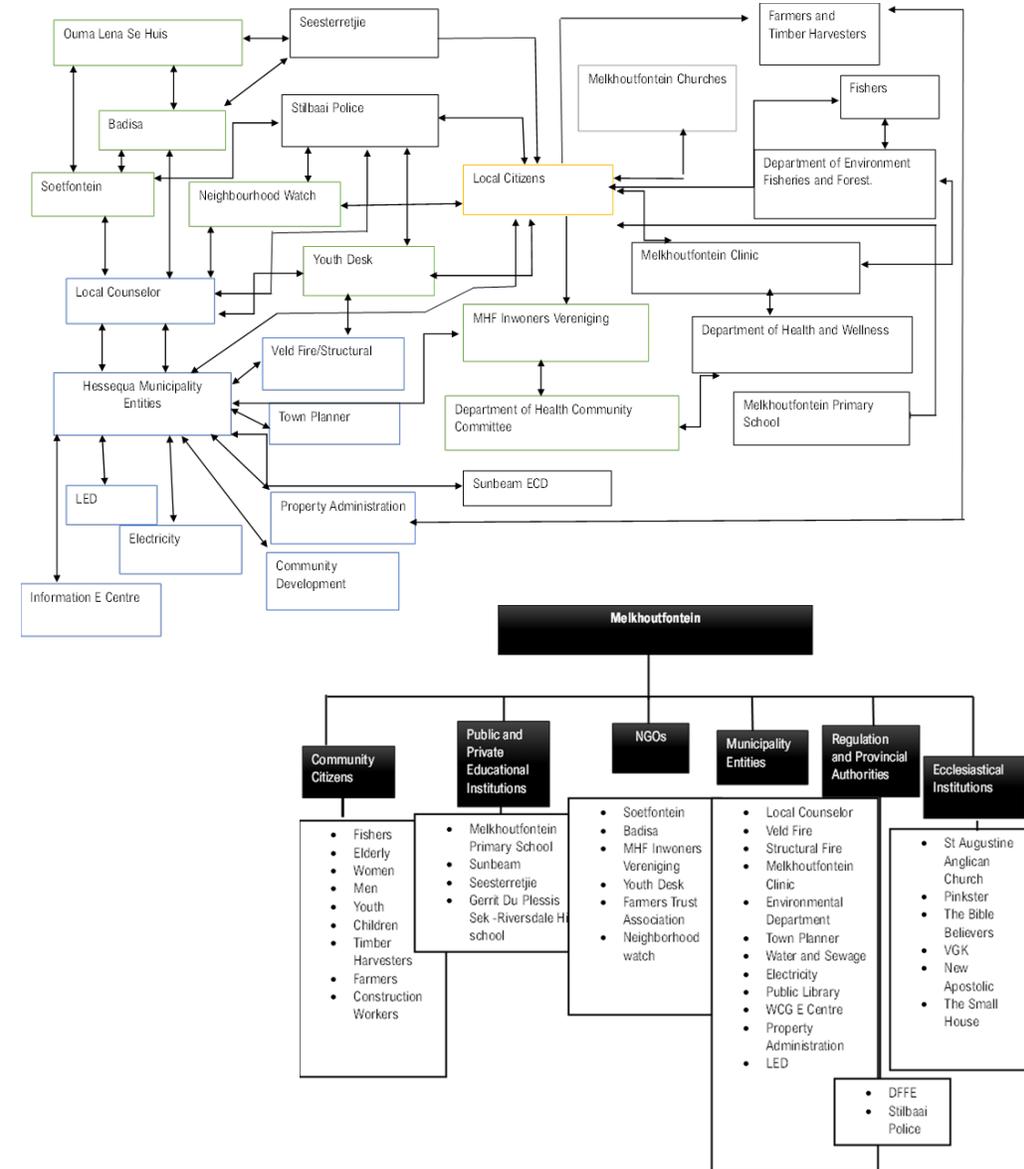






Creating Meaningful stakeholder engagement (Anna Mpala)

- System approach to stakeholder identification and analysis is a crucial first step in understanding who the stakeholders are in each case study area – done in depth in Melkhoutfontein.
- Needs analysis with representatives from the community.
- Ongoing: co-design and implement some of the attainable interventions within the project's time scale (e.g., a photo voice exhibition as a fundraising event).





Ethno(photo)graphic investigation of climate change narratives on the Swartkops River Estuary (James Granelli)

- Adaptation of photovoice and other ethnographic methods makes visible the often indescribable or unseen threads of climate change, thinking through climate change as a shadow: a mobile, shapeshifting, substantive, and affective force.
- The use of arts-based and ethnographic methods reveals the complexity of climate change in the lives of everyday people. It brings to the fore local knowledges previously unrecognized in marine management policy, opening the possibility for adaptation strategies that take account of such complexity and nuance.





Ongoing projects in knowledge integration

- Oko Sotshongaye - examining the benefit of different knowledge systems on decision-making to enhance the sustainable management of small pelagic fisheries.
- Semi-structured interviews with crew members, factory workers, and rights holders to explore system changes, particularly climate change; ultimately aiming to assess decision-making processes within the fishery.
- Results highlight challenges associated with knowledge exchange and inclusion in management decisions concerning climate change.
- Two projects looking at recreational fishers and their attitudes to climate change and issues around climate change adaptation.



Photo: Oko Sotshongaye

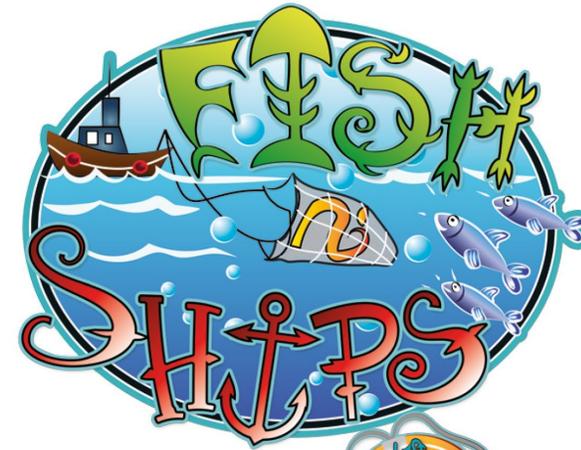


Photo: Kevern Cochrane



Fish n' Ships

- Card game to help build an understanding of sustainable fishing
- Developed for the Adriatic and adapted to the context of the southern Benguela in collaboration with game developers
- Translated into Afrikaans
- Science engagement tool within some of the Eco-ACE projects
- Explore collaborations for use of the game beyond the project



-  2-4 players
-  8+ years
-  30 minutes

CONTENT:
1 Rulebook
28 Fishing Cards
12 Bonus Cards
6 Malus Cards
118 Species Cards





Ongoing System-modelling component projects

- Modelling climate change impacts in the southern Benguela – Kelly Ortega-Cisneros; Lynne Shannon
- Incorporating small-scale fisheries (SSF) into the existing Ecosim & Atlantis model of the southern Benguela system (Lerusha Naidoo, M.Sc in progress).
- Relationship between the South Atlantic Anticyclone (SAA) and upwelling in the southern Benguela (Sivu Mbede, M.Sc in progress).
- Modelled scenario testing (Eco-ACE team) presented to selected communities as possible future scenarios as a basis for discussions (workshops).



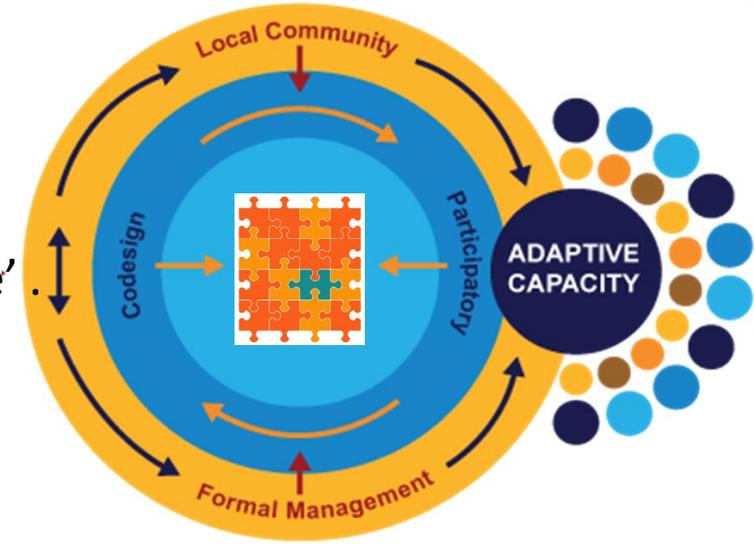
Photo: Louise Gammage



Photo: Troy Inman



Insights from progress made



- We've done a lot of the baseline work & are starting to put together our 'puzzle'.
- Exploring how to bring qualitative data into quantitative modelling – we are working on practical suggestions on methods that can be tested in the future by drawing on all the projects.
- This type of multi-scalar transdisciplinary work has a steep learning curve — flexibility and reflexivity are key.
- Teamwork is crucial, as is open communication between all team members.
- Stakeholder fatigue is problematic, and we need to think creatively to ensure that communities also draw benefit from participating in such projects (highlights the role of co-design).
- Integration is a balancing act involving definitions, statements, realities, and validity (it also highlights the need to agree on key definitions from the onset).
- When considering impacts: need to balance the need to meaningfully measure impact across the project and within very diverse projects in a comparable way.
- Potential Areas for synthesis:
 - what we learnt about climate change from the models;
 - how resources users frame (and interact) with climate change daily;
 - insights from the relational work (including trust building and measuring impact).

Thank You



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