Albertus J. **Smit**

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"For me, I am driven by two main philosophies: know more today about the world than I knew yesterday and lessen the suffering of others." – Neil deGrasse Tyson

Qualifications & academic focus

Education	Ph.D. in Marine Sciences with 24 years of academic experience
Academic interest	Marine ecology and climate change linked extreme events in coastal marine environments
Scientific philosophy	Strong affinity for hypothesis- and data-driven scientific inquiry

My research falls within the NRF Broad Category: Biological, Chemical, Earth Marine. It aligns to the National Strategies Grand Challenge – Global Change; Geographic Advantage – Marine and Antarctic Research & Biodiversity; Grand Challenge – Human and Social Dynamics; and Grand Challenge – Bio-Economy. My research is in support of the SDGs Sustainable Cities and Communities; Climate Action; Life Below Water; and Partnership and Goal.

Management & leadership

Contracts	Manage contract requirements around implementation of international research grants
Networks	Collaborations with colleagues from Australia, Canada, Japan, New Zealand, Norway, UK, and the USA
Financial	Secured ZAR 28.74 million to support research sustainability since 2014
Projects	Lead effective completion of diverse projects in coastal marine systems
Teams	Manage transdisciplinary teams of post-graduates, national and international colleagues

Management and leadership experience over the past eight years is evidenced by my high success rate in securing funding for national and international research programmes, and the subsequent completion of the programmes according to well-defined goals and objectives. A full list of successful grants is provided below under 'Research grants.'

Knowledge & experience

Strategic partnerships underpinned by effective and efficient dialogue with all stakeholders (across diverse world views, from the lay-person to scientists) encourage the co-generation of mutual goals and results in implementable research outputs. This is essential when working within transdisciplinary teams, and permits combining diverse skill sets to solving societally-relevant problems. The skill set I bring into the mix, and which I can clearly communicate, includes:

Reproducible research	`https://github.com/ajsmit`
Subject knowledge	Coastal ecology, ecophysiology, climate change, oceanography, biogeochemistry
Data management	Skilled in big data management and advocate of open data and FAIR principles
Remote sensing	Processing satellite data from Level 2 and above
Development	Developed **heatwaveR** R package—downloaded 24,000 times since 2018
Data analysis	Analysis of a wide array of data, including big data, on desktop, HPC, and distributed hardware
Software	Wide experience with open source scientific scripting languages, specifically R and python
Statistics	Expert in univariate statistics and quantitative ecology in environmental and biological sciences
Teaching	Teach undergraduate and Honours classes ranging in size from 10 to 700 students

Education

University of Port Elizabeth — *Gqeberha, South Africa*
B.Sc. in Biological Sciences — *1989–1992*
- Major in Zoology and Botany.

University of Port Elizabeth — *Gqeberha, South Africa*
B.Sc. (Honours) in Botany — *1993*
- Specialising in Marine Botany.

University of Port Elizabeth — *Gqeberha, South Africa*
M.Sc. in Marine Botany — *1994*
- Thesis: *Optimising* Gracilaria *verrucosa production in a laboratory-based culture system.*

University of Cape Town — *Cape Town, South Africa*
Ph.D. in Marine Botany — *1995–1997*
- Thesis: *Nitrogen environment, ecophysiology and growth of* Gracilaria gracilis *from Saldanha Bay, South Africa.*

Employment history

University of the Western Cape — *Bellville, Cape Town*
Associate Professor, Biodiversity & Conservation Biology Department — *October 2014–Present*
- Undergraduate and B.Sc. (Hons.) teaching
- Departmental and Faculty administration
- Marine Biological research

eThekwini Municipality — *Durban*
Climate Protection Scientist, Environmental Planning & Climate Protection Department — *2012–October 2014*
- Urban climate mitigation and adaptation planning

University of KwaZulu-Natal — *Westville, Durban*
Senior Lecturer, School of Biological & Conservation Sciences — *2004 - 2012*
- Undergraduate and B.Sc. (Hons.) teaching
- Departmental and Faculty administration
- Marine Biological research

University of Cape Town — *Rondebosch, Cape Town*
Research Fellow, Department of Botany — *2001–2004*
- Phycological research

Universidade do Algarve — *Faro, Portugal*
Postdoctoral Research Fellow, Centro de Ciências do Mar — *2001*
- Phycological research

The University of Western Australia — *Perth, Western Australia*
Honorary Research Fellow, Department of Botany — *2000*
- Shallow water coastal ecological research

D. A. Lord & Associates — *Perth, Western Australia*
Environmental Scientist — *1999–2000*
- Environmental management plans for small boat harbour development
- Environmental management plans for shell sand dredging

Edith Cowan University — *Joondalup, Western Australia*
Research Fellow, Center for Ecosystem Management — *1999*
- Shallow water coastal ecological research

Research grants

Note: Grant details only provided for the period of my employment at the UWC.

Extreme Climatic Events in the Benguela Upwelling System (EXEBUS)

University of the Western Cape

Belmont Forum *2021–2024*

Funding details Funded under the Collaborative Research Action Transdisciplinary Research for Ocean Sustainability.
Value ZAR 14 million funding.
Principal investigator A. J. Smit.
Co-Principal investigator Dr. Neville Sweijd.
Consortium SADSTIA (South Africa) | JAMSTEC (Japan) | CSIR (South Africa) | Wits (South Africa) | URI (United States of America) | IMR (Norway) | SAWS (South Africa) | UCT (South Africa) | UBC (Canada) | ACCESS (South Africa) | BCC (South Africa, Namibia, and Angola)
Summary EXEBUS undertakes an Integrated Ecosystem Assessment (IEA) to establish the roles, trends, and range of variability and the extremities of natural and anthropogenic geophysical, biological, governance, socio- economic features and phenomena, and assess their impact on ecological, sociological, governance, and macroeconomic systems and processes in the Benguela Current Large Marine Ecosystem (BCLME) of South Africa (SA), Namibia, and Angola. The goal is to strengthen the rational basis for management on relevant spatial and temporal scales (up to 2070).

iAtlantic

University of Edinburgh

European Union Horizon 2020 *2019–2023*

Value EUR 14.7 million funding with approx. ZAR 1 million to the UWC.
Principal investigator Prof. Murray Roberts.
South East Atlantic Coordinator A. J. Smit.
Consortium A consortium of international scientists spanning 34 organisations.
Summary Focussing on deep ocean ecosystems, iAtlantic creates a new operational framework that is correctly scaled and integrated to assess marine ecosystem status in an era of multiple stressors. The concept is that by bridging ocean observing systems, exchanging data, researchers, and equipment from South to North and East to West, iAtlantic will predict where and when potentially synergistic effects of global change and multiple stressors will occur.

Blue Growth Opportunities in Changing Kelp Forests (BlueConnect)

University of the Western Cape

SANOCEAN *2019–2022*

Funding details A SA/Norway joint research programme on ocean research (Project Number 287191).
Value ZAR 4 million to the UWC.
Principal investigator A. J. Smit.
Co-Principal invesigators Prof. Thomas Wernberg (Australia) | Dr. Karen Filbee-Dexter (Norway).
Consortium A consortium of scientists in Norway and South Africa.
Summary BLUECONNECT, for the first time, creates strategic research partnerships and valuable training opportunities between South Africa and Norway. The research focusses on kelp forests in South Africa, Norway, and globally in the face of climate change. The programme contains a strong capacity building component. that focus on coastal ecosystem health and sustainable development of marine resources.

Formation, fate and Transport of Microplastics in Marine Coastal Ecosystems (FORTRAN)

University of the Western Cape

SANOCEAN *2019–2022*

Funding details A SA/Norway joint research programme on ocean research.
Value ZAR 3.72 million to the UWC.
Principal investigator A. J. Smit.
Co-Principal invesigators Prof. Guven Akdogan (Stellenbosch University) | Drs. Andy Booth and Lisbet Sorensen (Norway).
Consortium A consortium of scientists in Norway and South Africa.
Summary FORTRAN addresses existing knowledge gaps related to the fate of plastic litter and micro- and nanoparticles either released into, or formed directly in the marine environment. that focus on coastal ecosystem health and sustainable development of marine resources.

Extreme Climatic Events in the Coastal Zone

University of the Western Cape

NRF/DSI *2019–2021*

Funding details Funded under the NRF Global Change Grand Challenge: Earth System Science Research Programme (Grant UID 118605).
Value ZAR 3.2 million.
Principal investigator A. J. Smit.
Summary Coupled atmosphere-marine climates affect the ecological/socio-economic important coastal systems. Our aim was to use various sources of data to assess the evidence and potential for change in this zone. This multidisciplinary research took place under two themes, i.e. i) the physical climate dynamics with a view of long-term change, and ii) the biotic (ecosystems and human societies) responses.

Upwelling Dynamics in Kelp Beds: Implications for Trophic Function

University of the Western Cape

NRF *2018–2020*

Funding details Funded under the NRF Competitive Programme for Rated Researchers (Grant UID 113350).
Value ZAR 654,000.
Principal investigator A. J. Smit.
Summary This research focussed on kep forests. We took advantage of the contrasting conditions integrated in the physical 'climate' of the nearshore environment in and around kelp forests to address the question: "how do the changing dynamics of the upwelling response influence the ecological structure and function of the kelp ecosystem in the southern Benguela Upwelling System?"

Epilithic diatoms on intertidal rocky substrate around the coast of South Africa

South African Coastal Observation Network

NRF *2018–2020*

Funding details Funded under the South Africa-Poland Bilateral Collaboration Project (Grant UID 102283).
Value ZAR 300,000.
Principal investigator Prof. Thomas Bornman.
Co-investigator A. J. Smit.

Thermal Characteristics of the South African Nearshore

University of the Western Cape

NRF *2015–2017*

Funding details Funded under the South Africa-Poland Bilateral Collaboration Project (Grant UID 93609).
Value ZAR 300,000.
Principal investigator A. J. Smit.

Kelps and climate change: South Africa in a global context

University of the Western Cape

NRF *2014–2016*

Funding details Funded under the NRF Competitive Programme for Rated Researchers (Grant UID 87755).
Value ZAR 1.57 million.
Principal investigator A. J. Smit.

Software development

heatwaveR

University of the Western Cape

A central algorithm for the detection of heatwaves and cold-spells *2017–present*

GitHub `https://robwschlegel.github.io/heatwaveR/index.html`
Downloads >24k times since 2018
DOI 10.5281/zenodo.1324308

RmarineHeatwaves

University of the Western Cape

Functions to calculate and display marine heatwaves according to the standard definition *2016–2018*

GitHub `https://github.com/ajsmit/RmarineHeatWaves`
Downloads >12k times

Teaching

Note: Teaching details only provided for the period of my employment at the UWC.

Ecophysiology

University of the Western Cape

BDC223 *2018–present*

- 70–90 students

Ecosystems Biogeography & Macroecology

University of the Western Cape

BDC334 *2019–present*

- 40–50 students

Biostatistics

University of the Western Cape

BCB743 *2018–present*

- 15–25 students
- `https://ajsmit.github.io/Intro_R_Official/`

Quantitative Ecology *University of the Western Cape*
BCB744 *2018–present*
- 7–14 students
- https://github.com/ajsmit/Quantitative_Ecology/

Postgraduate supervision

B.Sc. (Hons.)	37 graduates
M.Sc.	28 graduates
M.Phil.	1 graduate
Ph.D.	9 graduates
Post-doctoral Fellows	5 postdocs mentored

Faculty committees

2017–present	**Departmental Representative**, Faculty Higher Degrees Committee	*University of the Western Cape*
2015–2017	**Departmental Representative**, Student Affairs Committee	*University of the Western Cape*
2021	**Science Faculty Representative**, Intranet Phase 2: Online Forms and Workflows	*University of the Western Cape*

Editorial contributions

2018–present	**Associate Editor**, Aquatic Botany	*University of the Western Cape*
2020–present	**Associate Editor**, Frontiers in Ecology & Evolution	*University of the Western Cape*
2020–present	**Review Editor**, Biogeography and Macroecology	*University of the Western Cape*

In addition, reviewing done for Frontiers in Marine Science; Plos ONE; Proceedings of the National Academy of Sciences; Journal of Phycology; Estuarine Coastal & Shelf Science; African Journal of Marine Science; Hydrobiologia; Journal of Applied Phycology; Journal of Marine Systems; Marine Biology; Marine Ecology; Diversity & Distributions; Ecology & Evolution; Atmosfera

Publications

Abrahams, A., Schlegel, R. W., and Smit, A. J. (2021a). A novel approach to quantify metrics of upwelling intensity, frequency, and duration. *Plos one*, 16(7):e0254026.

Abrahams, A., Schlegel, R. W., and Smit, A. J. (2021b). Variation and change of upwelling dynamics detected in the world's eastern boundary upwelling systems. *Frontiers in Marine Science*, page 29.

Anderson, B., Smit, A., and Bolton, J. (1998). Differential grazing effects by isopods on *Gracilaria gracilis* and epiphytic *Ceramium diaphanum* in suspended raft culture. *Aquaculture*, 169(1-2):99–109.

Anderson, R., Bolton, J., Smit, A., and da Neto-Silva, D. (2012). The seaweeds of Angola: the transition between tropical and temperate marine floras on the west coast of southern Africa. *African Journal of Marine Science*, 34(1):1–13.

Bolton, J., Anderson, R., Smit, A., and Rothman, M. (2012). South African kelp moving eastwards: the discovery of *Ecklonia maxima* (Osbeck) Papenfuss at De Hoop Nature Reserve on the south coast of South Africa. *African Journal of Marine Science*, 34(1):147–151.

Bornman, T., Schmidt, J., Adams, J., Mfikili, A., Farre, R., and Smit, A. (2016). Relative sea-level rise and the potential for subsidence of the Swartkops Estuary intertidal salt marshes, South Africa. *South African Journal of Botany*, 107:91–100.

Botes, L., Smit, A., and Cook, P. (2003). The potential threat of algal blooms to the abalone (*Haliotis midae*) mariculture industry situated around the South African coast. *Harmful Algae*, 2(4):247–259.

Cockburn, J., Rouget, M., Slotow, R., Roberts, D., Boon, R., Douwes, E., O'Donoghue, S., Downs, C. T., Mukherjee, S., Musakwa, W., et al. (2016). How to build science-action partnerships for local land-use planning and management: lessons from durban, South Africa. *Ecology and Society*, 21(1).

Cockburn, J., Rouget, M., Slotow, R., Roberts, D., Boon, R., Douwes, E., O'Donoghue, S., Downs, C., Mukherjee, S., Musakwa, W., et al. Implementation of a science-action partnership to manage a threatened ecosystem in an urban context. *Ecology and Society*.

Coppin, R., Rautenbach, C., Ponton, T. J., and Smit, A. (2020). Investigating waves and temperature as drivers of kelp morphology. *Frontiers in Marine Science*, 7:567.

Cotiyane, P., Bornman, T., and Smit, A. (2017). Towards the biogeography of marine benthic diatoms along the coast of South Africa. *Phycologia*, 56(4):35.

Cotiyane-Pondo, P., Bornman, T. G., Dąbek, P., Witkowski, A., and Smit, A. J. (2020). Austral winter marine epilithic diatoms: Community composition and distribution on intertidal rocky substrate around the coast of South Africa. *Estuarine, Coastal and Shelf Science*, 242:106837.

de Lecea, A., Fennessy, S., and Smit, A. (2013). Processes controlling the benthic food web of a mesotrophic bight (KwaZulu-Natal, South Africa) revealed by stable isotope analysis. *Marine Ecology Progress Series*, 484:97–114.

de Lecea, A., Smit, A., and Fennessy, S. (2011). The effects of freeze/thaw periods and drying methods on isotopic and elemental carbon and nitrogen in marine organisms, raising questions on sample preparation. *Rapid Communications in Mass Spectrometry*, 25(23):3640–3649.

de Lecea, A., Smit, A. J., and Fennessy, S. (2016). Riverine dominance of a nearshore marine demersal food web: evidence from stable isotope and C/N ratio analysis. *African Journal of Marine Science*, 38(sup1):S181–S192.

de Lecea, A. M., Cooper, R., and Smit, A. J. (2015). Identifying the drivers of the pelagic ecosystem of an oligotrophic bight (KwaZulu-Natal, South Africa) using stable isotopes (δ13c, δ15n) and C:N ratio analysis. *Marine and Freshwater Research*, 67(11):1750–1761.

du Plooy, S., Perissinotto, R., Smit, A., and Muir, D. (2015). Role of salinity, nitrogen fixation and nutrient assimilation in prolonged bloom persistence of *Cyanothece* sp. in lake st lucia, South Africa. *Aquatic Microbial Ecology*, 74(1):73–83.

du Plooy, S., Smit, A., Perissinotto, R., and Muir, D. (2014). Nitrogen uptake dynamics of a persistent cyanobacterium *Cyanothece* sp. bloom in Lake St Lucia, South Africa. *African Journal of Marine Science*, 36(2):155–161.

Dyer, D., Bolton, J., Smit, A., and Anderson, R. (2017). Variability in stable isotope signatures of South African laminariales: implications for kelp forest food web studies. *Phycologia*, 56(4):47.

Dyer, D., Butler, M., Smit, A., Anderson, R., and Bolton, J. (2019a). Characterizing kelp forest pom during upwelling and downwelling conditions: using stable isotope analysis to differentiate between detritus and phytoplankton. *Marine Ecology Progress Series*, 619:17–34.

Dyer, D. C., Butler, M. J., Smit, A. J., Anderson, R. J., and Bolton, J. J. (2019b). Kelp forest POM during upwelling and downwelling conditions: using stable isotopes to differentiate between detritus and phytoplankton. *Marine Ecology Progress Series*, 619:17–34.

Dyer, D. C., Butler, M. J., Smit, A. J., Anderson, R. J., and Bolton, J. J. (2019c). Variability in stable isotope values of South African Laminariales, *Ecklonia maxima* and *Laminaria pallida*, over different spatial and temporal scales. *Marine Ecology Progress Series*, 628:55–71.

García-Reyes, M., Sydeman, W. J., Schoeman, D. S., Rykaczewski, R. R., Black, B. A., Smit, A. J., and Bograd, S. J. (2015). Under pressure: Climate change, upwelling, and eastern boundary upwelling ecosystems. *Frontiers in Marine Science*, 2:109.

Gartner, A., Lavery, P., and Smit, A. (2002). Use of δ15N signatures of different functional forms of macroalgae and filter-feeders to reveal temporal and spatial patterns in sewage dispersal. *Marine Ecology Progress Series*, 235:63–73.

Govender, N., Smit, A. J., and Perissinotto, R. (2011). Trophic functioning of the st. Lucia estuarine lake during a drought phase assessed using stable isotopes. *Estuarine, Coastal and Shelf Science*, 93(2):87–97.

Kirsten, K. L., Haberzettl, T., Wündsch, M., Frenzel, P., Meschner, S., Smit, A., Quick, L. J., Mäusbacher, R., and Meadows, M. E. (2018). A multiproxy study of the ocean-atmospheric forcing and the impact of sea-level changes on the southern Cape coast, South Africa during the Holocene. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 496:282–291.

Livingstone, T., Harris, J., Lombard, A., Smit, A., and Schoeman, D. S. (2018). Classification of marine bioregions on the east coast of South Africa. *African Journal of Marine Science*, 40(1):51–65.

Majewska, R., Mayombo, N. A., Smit, A. J., and Goosen, W. E. (2022). New observations on the diatom genus *Druehlago* (bacillariophyta) and description of two new species from South Africa. *Phycologia*, 61(1):75–88.

Massé, L., Schleyer, M., Séré, M., and Smit, A. Sexual reproduction of the coral *Pocillopora damicornis* at high latitude off the Durban coast.

Masse, L. M., Séré, M. G., Smit, A. J., and Schleyer, M. H. (2012). Sexual reproduction in *Pocillopora damicornis* at high latitude off South Africa. *Western Indian Ocean Journal of Marine Science*, 11(1):55–65.

Mayombo, N., Majewska, R., and Smit, A. (2019). Diatoms associated with two South African kelp species: *Ecklonia maxima* and *Laminaria pallida*. *African Journal of Marine Science*, 41(2):221–229.

Mayombo, N. A. S., Majewska, R., and Smit, A. J. (2020). An assessment of the influence of host species, age, and thallus part on kelp-associated diatoms. *Diversity*, 12(10):385.

Naidoo, T., Glassom, D., and Smit, A. J. (2015). Plastic pollution in five urban estuaries of KwaZulu-Natal, South Africa. *Marine pollution bulletin*, 101(1):473–480.

Naidoo, T., Smit, A., and Glassom, D. (2016). Plastic ingestion by estuarine mullet *Mugil cephalus* (mugilidae) in an urban harbour, KwaZulu-Natal, South Africa. *African Journal of Marine Science*, 38(1):145–149.

Ortega, K., Schoeman, D., Laudien, J., and Smit, A. The impact of a temporarily open/closed estuary on the community structure of a sandy beach macrobenthos in KwaZulu-Natal, South Africa.

Ortega-Cisneros, K., de Lecea, A. M., Smit, A. J., and Schoeman, D. S. (2017). Resource utilization and trophic niche width in sandy beach macrobenthos from an oligotrophic coast. *Estuarine, Coastal and Shelf Science*, 184:115–125.

Ortega Cisneros, K., Smit, A. J., Laudien, J., and Schoeman, D. S. (2011). Complex, dynamic combination of physical, chemical and nutritional variables controls spatio-temporal variation of sandy beach community structure. *PLoS One*, 6(8):e23724.

Pillay, K., Kisten, Y., Smit, A., and Glassom, D. (2019). Financing Emission Reductions. *Climate Change and Ocean Governance: Politics and Policy for Threatened Seas*, page 362.

Ramdhani, S., Cockburn, J., Wale, E., Ray-Mukherjee, J., Procheş, S., Mwabvu, T., Smit, A., Odindi, J., Musakwa, W., Willows-Munro, S., et al. (2016). How to build science-action partnerships for local land use planning and management: Lessons from Durban, South Africa.

Schlegel, R. and Smit, A. (2016a). Effects of natural variability of seawater temperature, time series length, decadal trend and instrument precision on the ability to detect temperature trends. *Journal of Climate*, 29(24):9113–9124.

Schlegel, R. W., Oliver, E. C., Hobday, A. J., and Smit, A. J. (2019). Detecting marine heatwaves with sub-optimal data. *Frontiers in Marine Science*, 6:737.

Schlegel, R. W., Oliver, E. C., Perkins-Kirkpatrick, S., Kruger, A., and Smit, A. J. (2017a). Predominant atmospheric and oceanic patterns during coastal marine heatwaves. *Frontiers in Marine Science*, 4:323.

Schlegel, R. W., Oliver, E. C., Wernberg, T., and Smit, A. J. (2017b). Nearshore and offshore co-occurrence of marine heatwaves and cold-spells. *Progress in oceanography*, 151:189–205.

Schlegel, R. W. and Smit, A. J. (2016b). Climate change in coastal waters: time series properties affecting trend estimation. *Journal of Climate*, 29(24):9113–9124.

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Smit, A. (2002). Nitrogen uptake by *Gracilaria gracilis* (rhodophyta): adaptations to a temporally variable nitrogen environment.

Smit, A., Brearley, A., Hyndes, G., Lavery, P., and Walker, D. (2005). Carbon and nitrogen stable isotope analysis of an *Amphibolis griffithii* seagrass bed. *Estuarine, Coastal and Shelf Science*, 65(3):545–556.

Smit, A., Fourie, A., Robertson, B., and Du Preez, D. (2003). Control of the herbivorous isopod, Paridotea reticulata, in *Gracilaria gracilis* tank cultures. *Aquaculture*, 217(1-4):385–393.

Smit, A., Robertson-Andersson, D., and Bolton, J. (2010). The effect of macroalgal and compound feeds on the sensory quality of cultivated South African abalone, *Haliotis midae* Linnaeus (Mollusca, Gastropoda). *Aquaculture nutrition*, 16(6):590–603.

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Smit, A. J. (1998). Nitrogen environment, ecophysiology and growth of *Gracilaria gracilus* in Saldanha Bay, South Africa.

Smit, A. J. (2001a). Food Web Studies using 13C and 15N. *Stable Isotope Techniques in the Study of Biological Processes and Functioning of Ecosystems*, 40:219.

Smit, A. J. (2001b). Source identification in marine ecosystems. In *Stable isotope techniques in the study of biological processes and functioning of ecosystems*, pages 219–245. Springer, Dordrecht.

Smit, A. J. (2004). Medicinal and pharmaceutical uses of seaweed natural products: A review. *Journal of Applied Phycology*, 16(4):245–262.

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Smit, A. J., Bolton, J. J., and Anderson, R. J. (2017). Seaweeds in two oceans: beta-diversity. *Frontiers in Marine Science*, 4:404.

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Sweijd, N. and Smit, A. (2020). Trends in sea surface temperature and chlorophyll-a in the seven African Large Marine Ecosystems. *Environmental Development*, 36:100585.

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Vanderklift, M. A., Kendrick, G. A., and Smit, A. J. (2006). Differences in trophic position among sympatric sea urchin species. *Estuarine, Coastal and Shelf Science*, 66(1-2):291–297.

Conference proceedings

Note: Incomplete listing of conference proceedings.

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