

Editorial: African Ocean Stewardship: Navigating Ocean Conservation and Sustainable Marine and Coastal Resource Management in Africa

1 **Jaco Barendse^{1,2*}, Pierre Failler³, Ifesinachi Okafor-Yarwood⁴, Judy Mann-Lang^{5,6}**

2 ¹Sustainability Research Unit, Nelson Mandela University, George, South Africa

3 ²Programme Assurance Team, Aquaculture Stewardship Council (ASC), London, United Kingdom

4 ³Centre for Blue Governance, UNESCO Chair in Ocean Governance, University of Portsmouth,
5 Portsmouth, United Kingdom

6 ⁴School of Geography and Sustainable Development, University of St Andrews, St Andrews, United
7 Kingdom

8 ⁵South African Association for Marine Biological Research, Durban, South Africa

9 ⁶Two Oceans Aquarium Foundation, Cape Town, South Africa

10 *** Correspondence:**

11 Jaco Barendse

12 jaco.barendse@gmail.com

13 **Keywords: Stewardship, Women, Small-scale fisheries, Certification, Local knowledge,**
14 **Livelihoods, Blue Economy, Africa.**

15 **1 Introduction**

16 **1.1 Africa's image, past and present**

17 With a total coastline of 26,000 nautical miles and combined Exclusive Economic Zone (EEZ) area
18 of 13,000 million km² (Surbun, 2021) the oceans surrounding the second largest continent and its
19 adjacent islands are among the most resource rich and biodiverse on Earth. Hosting some of the most
20 productive large marine ecosystems anywhere (Trégarot et al., 2020), Africa's coastal resources still
21 support livelihoods as they have for millennia and continue to attract international interests in
22 harvesting, mining, coastal development, energy, and tourism (Karani and Failler, 2020). Despite this
23 there remain challenges in distributing benefits derived from exploiting and managing its marine
24 resources back to the citizens of the 39 African coastal and island states. This is often attributed to the
25 continent's long colonial history and legacy, but also on ineffective governance, corruption, security,
26 lack of technical or scientific capacity, and limited access to investment and development
27 opportunities (Karani et al., 2022).

28 Infamously depicted as the ‘Dark Continent’ by the Victorian explorer Henry Morton Stanley¹, this
29 historic metaphor of Africa as ‘the other’ or being somehow different or inferior relative to the
30 power-bearing west or global north (Jarosz, 1992) continues in relation to topics such as immigration,
31 global wealth and health inequalities, human rights abuses; also, conservation (Pimm, 2007). Africa’s
32 true significance continues to be underappreciated on multiple levels (Figure 1) and is viewed by
33 many as a continent of much potential but little hope, a place that relies disproportionately on aid and
34 instruction from more developed states due to an inability to sustainably manage its own resources
35 and affairs. But does this image reflect reality or a lack of information?

36 **Insert Figure 1**

37 Certainly, a geographical bias exists in reporting on the successful emergence of African states from
38 the post-colonial era to take up a more prominent position in facing the manifold challenges of the
39 Anthropocene. In this respect, positive outcomes in sustainable marine and coastal resource
40 management from Africa is a particularly neglected area (Failler and Ferraro, 2021). There is a
41 persisting narrative that Africa remains a perpetual victim of neo-colonial influences (Langan, 2018;
42 Okafor-Yarwood and Onuoha, 2023), though not entirely without evidence: e.g., Africa suffers
43 disproportionately from the effects of harmful fishery subsidies originating from Europe and Asia
44 (Skerritt et al., 2023).

45 But not all negative issues originate from outside the continent. It is widely recognised that systemic
46 challenges such as corruption and lack of transparency and accountability undermine good
47 governance in many African nations, which diminish developmental opportunities and deprive
48 African people of a more sustainable and resilient future². Likewise, the way in which political power
49 is shared (or not shared), for example, through exclusion of traditional authorities (Henn, 2022) or
50 marginalisation of women may have profound effects on how people access and manage marine
51 resources.

52 This research topic aimed to uncover evidence that African coastal nations have moved on from
53 being solely victims or policy-takers, to a new position in the traditional world order, e.g., through
54 their embrace of the ‘Blue Economy’ narrative (Childs and Hicks, 2019; Failler et al., 2020; Okafor-
55 Yarwood et al., 2020). An indicator of such change might include examples of bottom-up initiatives
56 that allow local communities to take control of the resources available to them, or proof of breaking
57 free from externally imposed governance structures or challenging entrenched patriarchal power
58 arrangements.

59 **1.2 Stewardship as an approach to achieving sustainability outcomes**

60 In step with the rest of the world, the African discourse around resource management and
61 conservation is increasingly being expressed in terms of conceptual frameworks with ambitious
62 headline goals for sustainability such as the United Nations Sustainable Development Goals (SDGs),
63 the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), or
64 the Blue Economy (UNECA, 2016; Failler et al., 2022).

¹ Stanley, H. M. (1890) Through the Dark Continent. London: Sampson Low. [Pdf] Retrieved from the Library of Congress, <https://www.loc.gov/item/2021666780/>

² <https://www.imf.org/en/News/Articles/2022/06/13/sp061322-governance-and-accountability-in-africa-progress-and-road-ahead>

65 The successful implementation of such global development and resource management frameworks
66 will ultimately depend on the actions taken by local actors (individuals, groups, or networks) at a
67 local level (Andriamahefazafy et al., 2022). Such actions and their motivations are usefully framed
68 by the concept of environmental stewardship which describes the interplay between actors, their
69 actions, and the capacity to drive social-ecological outcomes (Barendse et al., 2016; Bennett et al.,
70 2018; Bodin, 2017). Although it may have multiple meanings (Enqvist et al., 2018) in essence
71 stewardship strives to deliver a sustainable future for species, ecosystems, and society (Chapin III et
72 al., 2015).

73 **2 Marine Stewardship in Africa**

74 Our aim with this Research Topic was to help address the information gap regarding successful
75 adoption of stewardship principles or implementation of stewardship actions in the marine and
76 coastal environment that can or have contributed to positive outcomes in the conservation and
77 sustainable resource management, specifically around the continent of Africa. Examples of the
78 adoption of non-regulatory stewardship approaches or actions for the conservation of marine and
79 coastal ecosystems and their sustainable management can include, but are not limited to: sustainable
80 resource use and co-management, including traditional and community-based approaches; resource
81 monitoring and knowledge production, including the use of traditional or local ecological knowledge
82 and citizen science; preservation and restoration of habitats and ecosystem services at local or
83 regional scales; market-linked mechanisms; and, benefit sharing arrangements.

84 **3 Themes in this research topic**

85 Seventeen articles were published under the research topic. These could be broadly assigned to the
86 following three themes.

87 **3.1 The role of women in resource management and governance – a gendered response**

88 Women have always been an integral feature in African fisheries; however, in the male dominated
89 societies common across much of Africa, their role and contribution have seldom been acknowledged
90 in policy and research (March and Failler, 2022; Okafor-Yarwood and Bhagwandas, 2021). This does
91 not mean that they do not play a critical role in resource management, but rather that it has rarely
92 been formally documented. Three of the contributions start to address this gap in our understanding
93 of women's role in fisheries management. [Chuku, et al.](#) highlighted the enormous scale of female
94 involvement in West African fisheries by their finding that close to 571,000 households benefited
95 from shellfish harvesting, undertaken by over 50,000 harvesters, mainly women. In the Gulf of
96 Guinea, [Okafor-Yarwood et al.](#) looked at the contributions of women in fisheries and their resilience
97 in the face of the COVID-19 pandemic while [de la Torre-Castro, et al.](#) examined the adaptive
98 capacity of women faced with the impacts of climate change in fisheries in Zanzibar. Together these
99 papers not only demonstrate the scale of women's role as critical stewards of marine resources, but
100 also spotlight some of the unique conditions and challenges they face in the highly variable and
101 vulnerable fisheries sector and how to address them.

102 **3.2 Community-based management, and considering local information and knowledge in** 103 **planning and policy**

104 The importance of integrating local knowledge through participatory processes with community
105 members cannot be overestimated. There is mounting evidence that without effective local
106 community engagement and participation, conservation efforts are unlikely to succeed. [Strand,](#)

107 [Rivers and Snow](#) showed how arts-based participatory research methods were able to co-create
108 knowledge in Algoa Bay, South Africa. They suggested that these methods can help to surface
109 cultural connections to the ocean, and thereby understand ways in which people relate to and care for
110 the ocean and coast, therefore fostering stewardship. In a study in Kenya, [Kinuya et al.](#) found that
111 involvement of resource users, in this case artisanal billfish fishers, helped to promote a bottom-up
112 approach to the co-management of billfish which can complement current regional and national
113 efforts which have previously focused primarily on commercial fisheries.

114 Marine spatial planning, inclusive conservation policy, and evaluation frameworks are crucial for
115 informed decision-making and effective management of marine environments. While acknowledging
116 the contribution of South Africa's Marine Protected Area network in formally protecting marine
117 biodiversity, [Peer et al.](#) used case studies to also highlight how the historical approach to protected
118 area management in South Africa has led to the exclusion of coastal communities, and negatively
119 impacted community perceptions of protected areas. They offer several suggestions that could
120 contribute towards a more community-involved approach to the ongoing protection and management
121 of marine ecosystems and biodiversity.

122 [Ogara et al.](#) presented an indicator-based approach for assessing the sustainability of port cities in the
123 Global South, focusing on marine ecosystems and local communities. [Smit et al.](#) provided
124 recommendations for overcoming challenges in coastal and marine assessments in developing
125 countries. [Thoya et al.](#) examined the concerns of small-scale fishers in Kenya and Tanzania
126 concerning the development of port infrastructure, proposing steps for their meaningful engagement
127 and sustainable fishing practices. The importance of considering demographic and climate change
128 dynamics, such as the scale of migration of artisanal fishers involved in harvesting when designing a
129 management framework for West African small pelagic fisheries, was shown by [Dème et al.](#)

130 **3.3 Fisheries management from local to global scale**

131 The use of voluntary certification schemes and market-based mechanisms for fisheries management
132 was the topic of three papers. [Oloruntuyi et al.](#) provided a broad overview of all involvement to date
133 of African fisheries with the Marine Stewardship Council (MSC) fishery standard. They show that
134 voluntary environmental standards may be used as a stewardship tool by a wide range of fisheries to
135 achieve improvements, although attaining certification remains an elusive goal for many African
136 fisheries, especially small-scale ones. This is supported by [Nyjawung and Erasmus](#) who provided a
137 closer look at two very different fisheries: The Gambian sole and Namibian hake. The former is a
138 small-scale fishery that has been engaged with the MSC standard since 2007 but never achieved
139 certification, while the latter is only the second nearshore fishery to become MSC certified. Both
140 fisheries exhibit the multiple dimensions of stewardship (Care-Knowledge-Agency) through
141 engagement with the MSC. The sole fishery benefited through improved co-management and better
142 cooperation, and thus wider stakeholder involvement in stewardship activities. For Namibian hake,
143 apart from gaining access to premium export markets, certification has improved management of a
144 shared hake stock with neighbouring South Africa and promoted the adoption of an ecosystem
145 approach to fisheries management. While global ecolabels may not have gained a significant foothold
146 in African seafood markets, [Glass et al.](#) found that there may be space for designing and
147 implementing locally relevant seafood labelling programmes (e.g., linked to the tourism sector).
148 Provided that there is broad consultation on economic, social, and cultural aspects and an
149 acknowledgement of location-specific differences (Nthane et al., 2020), market-based approaches
150 and certification may offer a viable way to engage with the Blue Economy and SDGs.

151 Although there may be doubt about the prominence of Africa on the global stage and its ability to
152 take on established power arrangements, the management of highly migratory fish stocks provides an
153 interesting case study. The importance of tuna resources for African countries is demonstrated by
154 [Oloruntuyi et al.](#) who reported that 18 different tuna fisheries having engaged with the MSC, many
155 now certified. These fisheries have complex configurations: many operate across multiple EEZs and
156 the high seas, some include foreign flagged vessels, and they use a wide variety of fishing gears and
157 practises, including fish aggregating devices (FADs). This echoes the complexity of the management
158 systems in place for tuna resources in the form of Regional Fishery Management Organizations
159 (RFMOs). Perhaps nowhere does this play out more strongly than on the management stage of the
160 Indian Ocean Tuna Commission (IOTC) where, as discussed by [Hussain et al.](#), a grouping including
161 several African nations have started to stand up against the might of the European Union fishing
162 interests by opposing certain fishing practises^{3,4}.

163 4 Conclusion

164 African coastal nations are beginning to adopt holistic approaches such as the Africa Blue Economy
165 Strategy to set the agenda for its sustainable development over the next decades. This will require the
166 adoption and implementation of diverse stewardship actions by multiple actors at different scales.

167 Given the extent of environmental degradation and magnitude of challenges associated with global
168 climate change, the analysis by [Kimeli et al.](#) on how sea level rise might impact important mangrove
169 forests is a timely reminder that holistic management and quality empirical data are crucial elements
170 for designing lasting adaptation and restoration strategies. A real-world example is provided by
171 [Murray et al.](#) who showcased how telemetry data generated by South Africa's Acoustic Tracking
172 Array Platform (ATAP) can promote effective ocean stewardship by allowing engagement with
173 stakeholders and contributing to species and habitat conservation.

174 Some 'Blue Projects' from Africa that have highlighted that positive outcomes can be achieved
175 through local communities' involvement, and by considering sustainability in its broadest sense
176 (ecological, economic, socio-cultural, and institutional) (Okafor-Yarwood et al., 2020). On the other
177 hand, these projects can also have negative impacts on the livelihoods of some communities or pitch
178 different sectors against each other, e.g., industrial vs. artisanal fishers (Ayilu, 2023; Ayilu et al.,
179 2023; March and Failler, 2022).

180 For some small-scale fishing communities, not enough has been done to integrate traditional
181 management with policy, therefore allowing fisheries to fish down the food web as demonstrated by
182 [Gough et al.](#) in western Madagascar. Failure to adapt to change could threaten food security of
183 already struggling communities. This emphasises the need for any sustainability solutions to also be
184 equitable (Folke et al., 2021).

185 Many of the contributions make a strong case to favour less reliance on external drivers in favour of
186 home-grown African stewardship solutions to global environmental challenges. More research is
187 required in this area: perhaps recent attempts to quantify and develop indicators for coastal

³ <https://www.politico.eu/article/environmental-cash-for-fish-eu-flashes-green-money-to-support-indian-ocean-tuna-grab/>

⁴ <https://www.bluemarinefoundation.com/2023/05/10/legal-action-launched-against-the-european-commission-for-its-objection-to-iotc-fads-resolution/>

188 stewardship actions and their motivations (Turnbull et al., 2020a, 2020b) may be helpful in framing
189 such analyses in an African context.

190 **5 Conflict of Interest**

191 *The authors declare that the research was conducted in the absence of any commercial or financial*
192 *relationships that could be construed as a potential conflict of interest.*

193 **6 Author Contributions**

194 JB wrote the first draft of the manuscript. PF, JM-L, and IO-Y wrote sections of the manuscript. All
195 authors contributed to manuscript revision, read, and approved the submitted version.

196 **7 Funding**

197 No funding was received by any of the authors for the conception of the research topic or writing of
198 the editorial.

199 **8 Acknowledgments**

200 All contributing authors are thanked for choosing to submit their papers to this research topic. Kai
201 Krause is thanked for creating the visualisation used in Figure 1 which is in the public domain.

202 **9 References**

203 Andriamahefazafy, M., Touron-Gardic, G., March, A., Hosch, G., Palomares, M.L.D., and Failler, P.
204 (2022). Sustainable development goal 14: To what degree have we achieved the 2020 targets for our
205 oceans? *Ocean and Coastal Management*. 227 (106273), 1-9.
206 <https://doi.org/10.1016/j.ocecoaman.2022.106273>

207 Ayilu, R.K. (2023). Limits to blue economy: challenges to accessing fishing livelihoods in Ghana's
208 port communities. *Maritime Studies*. 22, 11. <https://doi.org/10.1007/s40152-023-00302-8>

209 Ayilu, R.K., Fabinyi, M., Barclay, K., and Bawa, M.A. (2023). Blue economy: industrialisation and
210 coastal fishing livelihoods in Ghana. *Reviews in Fish Biology and Fisheries*.
211 <https://doi.org/10.1007/s11160-022-09749-0>

212 Barendse, J., Roux, D., Currie, B., Wilson, N. and Fabricius, C. (2016). A broader view of
213 stewardship to achieve conservation and sustainability goals in South Africa. *South African Journal*
214 *of Science*. 112 (5/6), 2015-0359, 15 pages. <http://dx.doi.org/10.17159/sajs.2016/20150359>

215 Bennett, N.J., Whitty, T.S., Finkbeiner, E., Pittman, J., Bassett, H., Gelcich, S., et al. (2018).
216 Environmental Stewardship: A Conceptual Review and Analytical Framework. *Environmental*
217 *Management*. 61, 597–614. <https://doi.org/10.1007/s00267-017-0993-2>

218 Bodin, Ö. (2017). Collaborative environmental governance: Achieving collective action in social-
219 ecological systems. *Science*. 357, 6352. <https://www.science.org/doi/10.1126/science.aan1114>

220 Chapin III, F.S., Sommerkorn, M., Robards, M.D. and Hillmer-Pegram, K. (2015). Ecosystem
221 stewardship: A resilience framework for arctic conservation. *Global Environmental Change*. 34, 207-
222 217. <https://doi.org/10.1016/j.gloenvcha.2015.07.003>.

- 223 Childs, J. and Hicks, C.C. (2019). Securing the blue: political ecologies of the blue economy in
224 Africa. *Journal of Political Ecology*. 26, 323-465. <https://doi.org/10.2458/v26i1.23162>
- 225 Enqvist, J.P., West, S., Masterson, V.A., Jamila Haider, L., Svedin, U. and Tengö, M. (2018).
226 Stewardship as a boundary object for sustainability research: Linking care, knowledge and agency.
227 *Landscape and Urban Planning*. 179, 17-37. <https://doi.org/10.1016/j.landurbplan.2018.07.005>.
- 228 Failler P., Ndende, M., Karani, P., Mengisteab Gilau, A., Hamukuaya, H. and Thiam Diop, S. (2020).
229 *Blue Governance Framework for the African Union Blue Economy Strategy*. (Nairobi, Kenya,
230 African Union InterAfrican Bureau for Animal Resources (AU-IBAR)) Available at:
231 <http://dx.doi.org/10.13140/RG.2.2.29217.43369> (Accessed 22 June 2023).
- 232 Failler, P., and Ferraro, G. (2021). Fishermen migration in Africa: a historical perspective and some
233 introductory notes. *African Identities*. 19 (3), 245-252.
234 <https://doi.org/10.1080/14725843.2021.1937053>
- 235 Failler P., Hamukuaya, H. and March, A. (2022). *The Future of Marine Fisheries in the African Blue*
236 *Economy*. (Abidjan, Cote d'Ivoire, African Development Bank Group). Available at:
237 <https://www.afdb.org/en/documents/future-marine-fisheries-african-blue-economy>. (Accessed 22
238 June 2023).
- 239 Folke, C., Polasky, S., Rockström, J. Galaz, V., Westley, F., Lamont, M., et al. (2021) Our future in
240 the Anthropocene biosphere. *Ambio*. 50, 834–869. <https://doi.org/10.1007/s13280-021-01544-8>
- 241 Henn, S. (2022). Complements or Substitutes? How Institutional Arrangements Bind Traditional
242 Authorities and the State in Africa. *American Political Science Review*. 1-20.
243 <https://doi:10.1017/S0003055422001137>
- 244 Jarosz, L. (1992). Constructing the Dark Continent: Metaphor as Geographic Representation of
245 Africa. *Geografiska Annaler, Series B, Human Geography*. 74 (2), 105-115.
246 <https://doi.org/10.2307/490566>
- 247 Karani P. and Failler, P. (2020). Comparative coastal and marine tourism, climate change, and the
248 blue economy in African Large Marine Ecosystems. *Environmental Development*. 36 (100572), 1-9.
249 <https://doi.org/10.1016/j.envdev.2020.100572>
- 250 Karani, P., Failler., P., Mengisteab Gilau, A., Ndende, M. and Thiam Diop, S. (2022). Africa Blue
251 Economy Strategies Integrated in Planning to Achieve Sustainable Development at National and
252 Regional Economic Communities (RECs). 4 (3), e220011. <https://doi.org/10.20900/jstr20220011>
- 253 Langan, M. (2018). Neo-Colonialism and the Poverty of 'Development' in Africa. Palgrave
254 Macmillan Cham. 253pp. <https://doi.org/10.1007/978-3-319-58571-0>
- 255 March, A. and Failler, P. (2022). Small Small-scale fisheries development in Africa: Lessons learned
256 and best practices for enhancing food security and livelihoods. *Marine Policy*. 136 (104925).
257 <https://doi.org/10.1016/j.marpol.2021.104925>
- 258 Nthane T.T., Saunders, F., Gallardo Fernández, G.L. and Raemaekers, S. (2020). Toward
259 Sustainability of South African Small-Scale Fisheries Leveraging ICT Transformation Pathways.
260 *Sustainability*. 12 (2), 743. <https://doi.org/10.3390/su12020743>

- 261 Okafor-Yarwood, I., Kadagi, N.I., Miranda, N.A.F., Uku, J., Elegbede I.O. and Adewumi I.J. (2020).
 262 The Blue Economy–Cultural Livelihood–Ecosystem Conservation Triangle: The African Experience.
 263 *Frontiers in Marine Science*. 7. <https://www.frontiersin.org/articles/10.3389/fmars.2020.00586>
- 264 Okafor-Yarwood, I., Bhagwandas, S.,v.d.B. (2021). Women are a mainstay of fishing in West Africa.
 265 But they get a raw deal. *The Conversation*. Available at: [https://theconversation.com/women-are-a-](https://theconversation.com/women-are-a-mainstay-of-fishing-in-west-africa-but-they-get-a-raw-deal-159283#)
 266 [mainstay-of-fishing-in-west-africa-but-they-get-a-raw-deal-159283#](https://theconversation.com/women-are-a-mainstay-of-fishing-in-west-africa-but-they-get-a-raw-deal-159283#)
- 267 Okafor-Yarwood, I.M. and Onuoha, F.C. (2023) ‘Whose security is it? Elitism and the global
 268 approach to maritime security in Africa’. *Third World Quarterly*. 44 (5), 946-966. Available at:
 269 <https://doi.org/10.1080/01436597.2023.2167706>.
- 270 Pimm, S.L. (2007). Editorial: Africa: Still the “Dark Continent”. *Conservation Biology*. 21 (3), 567–
 271 569. <https://conbio.onlinelibrary.wiley.com/doi/pdf/10.1111/j.1523-1739.2007.00697.x>
- 272 Skerritt, D.J., Schuhbauer, A., Villasante, S., Cisneros-Montemayor, A.M., Bennett, N.J., Mallory,
 273 T.G., et. al. (2023). Mapping the unjust global distribution of harmful fisheries subsidies. *Marine*
 274 *Policy*. 152 (105611). ISSN 0308-597X. <https://doi.org/10.1016/j.marpol.2023.105611>
- 275 Surbun, V. (2021). *Africa’s combined exclusive maritime zone concept*. Report 32, February 2021.
 276 Institute for Security Studies. Available at: <https://issafrica.s3.amazonaws.com/site/uploads/ar-32.pdf>
 277 (Accessed 18 June 2023).
- 278 Trégarot, E., Touron-Gardic, G., Cornet, C. and Failler, P. (2020). Valuation of coastal ecosystem
 279 services in the Large Marine Ecosystems of Africa. *Environmental Development*. 36 (100584).
 280 <https://doi.org/10.1016/j.envdev.2020.100584>
- 281 Turnbull, J.W., Johnston, E.L., Kajlich, L. and Clark, G.F. (2020a). Quantifying local coastal
 282 stewardship reveals motivations, models and engagement strategies. *Biological Conservation*. 249
 283 (108714). ISSN 0006-3207. <https://doi.org/10.1016/j.biocon.2020.108714>
- 284 Turnbull, J.W., Johnston, E.L. and Clark, G.F. (2020b). LESI: A quantitative indicator to measure
 285 local environmental stewardship. *MethodsX*. 7 (101141). <https://doi.org/10.1016/j.mex.2020.101141>.
- 286 UNECA. (2016). *Africa's Blue Economy: A policy handbook*. (Addis Ababa, Ethiopia, United
 287 Nations Economic Commission for Africa). Available at:
 288 <https://wedocs.unep.org/bitstream/handle/20.500.11822/30130/AfricasBlueEconomy.pdf> (Accessed
 289 22 June 2023).

290 10 Figures

291 **Figure 1. Africa’s true extent is commonly misjudged due to it not being shown to scale by**
 292 **widely used map projections such as Mercator which may reinforce historical perceptions of its**
 293 **insignificance or inferiority on the global stage (image in the public domain created by Kai**
 294 **Krause⁵)**

⁵ <http://kai.sub.blue/images/True-Size-of-Africa-kk-v3.pdf>

Figure 1.JPEG

