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When the ‘Asset’ Is Livelihood: Making Heritage with the Maritime Practitioners of Bagamoyo, Tanzania

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Abstract: This paper examines the dilemmas, obligations and opportunities faced by heritage professionals in elaborating cultural ‘assets’ among the breadwinning practices of contemporary, artisanal communities. It takes as its case study the authors’ *Bahari Yetu, Urithi Wetu* (‘Our Ocean, Our Heritage’) project and its engagement with maritime practitioners in and around the town of Bagamoyo, Tanzania. The article identifies Bagamoyo’s contemporary maritime scene as meriting heritage recognition on a global level, yet sitting entirely outside the country’s legal and political conception of heritage. Moreover, it acknowledges that ‘heritage’ as founded on the livelihood-earning activities of the community’s practitioners, such as boatbuilders, fishers and mariners. These often operate at subsistence level, yet are subject to transformative economic, social and environmental forces, as well as government agencies with no heritage remit. Drawing upon and reporting their co-creative engagements and activities with the Bagamoyo community, the authors argue for a non-reifying and people-centred approach to ‘living’ heritage situations such as that of maritime Bagamoyo, in which the tools of heritage engagement are deployed to amplify the concerns of the practitioner community to a wider audience.

Keywords: Bagamoyo; maritime cultural heritage; coastal livelihoods; fishing; boats; Indian Ocean; knowledge co-production; community engagement



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1. Introduction

How might East African coastal communities, who make their livings from the Indian Ocean, benefit from the interventions of heritage professionals proposing to identify their breadwinning activities as heritage ‘assets’? Tens of thousands of people in the region are engaged daily in income-oriented maritime pursuits, drawing upon the rich natural resources of the Indian Ocean continental shelf and the trade connections that it affords. This engagement largely takes the form of small-scale, artisanal fishing and auxiliary activities such as boatbuilding, fish processing, marketing, and distribution. People also make their livings through cargo trade, mainly between the mainland and the Zanzibar archipelago, through inter-tidal resource gathering, and, in some locations, through coastal tourism and leisure. Such maritime activities have, as Ichumbaki has recognised elsewhere “long been part and parcel of people’s daily activities” along this coast ([1], p. 526). They come with a unique material and intangible culture that heritage professionals might readily identify as ‘assets’ of cultural significance. But who elucidates this heritage, and what benefits should accrue to its practitioners? We explore these issues through our engagements with the communities of the town of Bagamoyo, Tanzania, and its surrounding settlements.

Outside observers do not necessarily require the lens of ‘heritage’ to appreciate the skills, expertise, and specialised material cultures of maritime practitioners in towns such

as Bagamoyo. It is, after all, this matrix of knowledge, praxis, cognition and social entanglement that enables artisanal communities to sustain themselves with limited outside help by drawing on the natural affordances of the ocean, coast and—for boatbuilders—forest. Moreover, we see no evidence that maritime practitioners themselves have, for their part, been clamouring for an etic ‘heritage’ lens to be applied to their day-to-day practices. Indeed, people often resent the intrusion of insensitive outsiders wielding cameras—be they tourists or academic researchers. Communities do, however, seek security of tenure within their maritime domains and improvement to their living standards—and means to achieve these goals that a heritage perspective might inform.

Yet the making of at least a consumer heritage out of East Africa’s maritime cultural expression is already under way, along with its monetisation within a global economy. The growing accessibility of international flights has—setting aside the effects of the COVID-19 pandemic—swelled tourist numbers to the region, particularly around hotspots such as Zanzibar, across the water from Bagamoyo [2]. This tourist flow delivers income to hotels, restaurants, tour companies and various government agencies, as well as generating employment for some. Meanwhile, it increasingly delivers benefit to tech giants based elsewhere on the planet: a glance online at social media (using, for example, the hashtags #dhow, #zanzibar or #indianocean) reveals that images of the Swahili coast are created, recreated and shared by tourism companies as lures, and also ‘performed’ in turn by tourists as digital trophies and signifiers: Thurlow and Jaworski ([3], p. 220) call these the ‘mediatized activities’ of online tourist discourse. In our case, the discourse creates and exploits a symbolic constitution of East Africa’s coastal tourism: social media frequently features beautiful people posed on wooden watercraft, outrigger canoes floating on tropical waters, and so forth. Each post, and each click thereon, delivers revenue to social-media companies. In such ways, East Africa’s maritime heritage is already monetised. Yet local maritime communities benefit little from this process, if at all (see below).

Meanwhile, maritime-heritage professionals are also assessing the region’s potential ‘resource’—as with our present project, which was supported by the *Rising from the Depths* network, a maritime-focused funding initiative explicitly engaging with maritime heritage as a potential means of socio-economic development (see below). Tanzania’s coastal archaeological sites have long been identified for protection—by local communities according to local customary practice, and more recently under Tanzania’s 1964 Antiquities Act, amended in 1979 ([4], pp. 52, 56). These terrestrial locales have also been relatively widely discussed in academic literature as archaeological and heritage entities ([4–8], pp. 57, 91), [9–16]. More recently, maritime archaeologists in the country have also turned their attention to specifically underwater heritage (see below). But what heritage professionals have so far hardly engaged with at all is what might be crudely characterised as East Africa’s ‘living’ maritime heritage—that complex of lifeways and material cultures practised today among the communities to whom we first alluded. And yet, when Ichumbaki recently polled coastal communities in Bagamoyo and the nearby villages of Mkadini, Mlingotini, Pande and Mbegani to discover what they considered their greatest heritage asset, local contributors gave a clear, but also challengingly holistic answer: ‘the ocean’ [17].

To people for whom the sea is integral to their experience, such an all-encompassing expression of ‘heritage’ is, perhaps, unsurprising. But it is hardly a convenient or engaging answer for heritage professionals seeking to circumscribe such a heritage upon which the distinct and professional instruments of their practice can act. It does not, after all, lend itself to the designation, documentation, and reification of a set of human practices and material culture as constituting a ‘heritage’—let alone to the development of policies and expenditures around their curation as heritage ‘assets’. In such contexts, the heritage professional’s ‘urge to preserve’ inevitably encounters the stark economic realities and strategies of artisanal communities whose priority is self-support in economically challenging circumstances, and who do not enjoy the luxury of ‘heritage preservation for preservation’s sake’ or ‘heritage as leisure’ that may be found elsewhere in the world.

Meanwhile, Tanzania's contemporary maritime practices remain largely invisible to state agencies with an explicit interest in heritage—for example the Ministry of Culture, Artists & Sport or the Ministry of Natural Resources & Tourism. In part, this may be because such practices—current, often intangible, and geographically diffuse—are not recognised as 'heritage' in law. And yet the multi-dimensional nature of this maritime world does make it, de facto, the regulatory object of many state agencies, none of which have heritage, per se, as their remit. These include the Ministries of Livestock & Fisheries, Finance & Planning, and Works & Transport, as well as the Tanzania Port Authority, the Tanzanian Coast Guard and local planning authorities. As a result, communities—as well as heritage professionals seeking to identify and 'develop' aspects of those communities' maritime heritage—are subject to the unaligned and often conflicting priorities of state agencies around economic development and sustainability, for example, in the drive for infrastructure development or the enforcement of fishery and forestry regulations. In such circumstances, 'heritage ... is pulled in different directions by various agents', each with their own agenda, as Baillie and Sørensen observe in a broader African context ([18], p. 3), but which could equally apply globally. Nowhere is this tension truer than in Bagamoyo, where proposals for a massive complex comprising an international port and associated industries and tourist facilities—the Bagamoyo Special Economic Zone (BSEZ)—continue to hang over the community, promising opportunity for some and upheaval for others, but change for all (see below).

In this paper, we present and reflect upon a series of heritage-oriented interventions instigated by the authors in and around Bagamoyo that sought co-creative engagement with grass-roots maritime practitioners, conducted as part of the *Bahari Yetu, Urithi Wetu* ('Our Sea, Our Heritage') project. We outline something of the range of maritime actors, activities, knowledge, and space that are components of the numerous maritime lifeways with which we engaged, and that might reasonably fall under the nebulous term 'heritage' as understood in the academic-professional realm. We reflect on these as, equally, the multi-faceted, skilled and spatially situated breadwinning activities of artisanal communities, and highlight the daily pressures and change processes that practitioners experience in undertaking them. Finally, we consider the implications—and feasibility—of approaching these activities as 'heritage', both for their long-term sustainability and the interests of their practitioners.

2. Context: The Maritime 'Heritage' of Bagamoyo

The coastal port and fishing town of Bagamoyo sits on a shallow embayment on the coast of mainland Tanzania's Pwani ('Coastal') region, facing the island of Unguja, Zanzibar, some 40 km away across the Zanzibar Channel (Figure 1). The town is best-known to international humanities scholarship for its historic role as entrepôt of the Indian Ocean slave trade [19,20], ([21], p. 174), [22,23], for its short-lived status as capital of German East Africa [24], and, perhaps, also, for featuring in the funerary journey of a(n in)famous figure of the European imperialist age, David Livingstone ([25], (pp. 342, 344 and *passim*). More importantly for the inhabitants of the eponymous Bagamoyo District (population in 2012: 311,740 [26]), the modern town is a centre of local government and commerce, with schools, a satellite university campus, a district hospital, and centres of Islamic and Christian worship. Economic activity focuses on the town's markets, and particularly the sea front, which is home to an artisanal fishing fleet and fish markets, to a small cargo port mainly serving sailing *mashuas* bound to and from Zanzibar, and to a handful of hotels. The population is majority Muslim, and largely comprises people of the Wazaramo, Wadoe, Wakwere and Wazigua ethnic groups.



Figure 1. Locator maps showing (A) the location Bagamoyo on the East African coast; (B) Bagamoyo and nearby villages mentioned in the text, together with fishing areas within the Zanzibar Channel identified by members of the fishing community through collaborative mapping; (C) close-up of coast around Bagamoyo and the Mlingotini Lagoon, showing locations mentioned in the text. (Images: John P Cooper; contributors to the collaborative mapping exercise; Google Earth).

To date, formal heritage professionals have largely conceived of and addressed Bagamoyo's heritage through its built environment, particularly the numerous, mostly 19th century C.E., buildings of its central 'Stone Town' area (Figure 2A–C,E), as well as the 13th–16th century C.E. standing ruins at Kaole, some 5 km southward along the coast (Figure 2D). Also important within Bagamoyo are the 17th century Mwanamakuka stone-built tombs, the German cemetery, and the hanging place, where local chiefs were executed during the resistance wars. Most of these enjoy formal protection under Tanzanian antiquities law and are visited by tourists. Nevertheless, many structures are in a state of collapse through abandonment or lack of maintenance: Over 80% of buildings on the town's Indian Street have already disappeared [27]. Those surviving best have ticketed entry—such as the Fort (Figure 2B) and Caravanserai—or have found alternative uses as administrative buildings (such as the Arab Tea House (Figure 2C)), restaurants or hotels. The history and condition of this built heritage has been examined by several scholars in recent years [1], ([4], p. 56), [24,27–29]. Yet, for most residents of Bagamoyo, such structures are marginal to their daily lives.



Figure 2. The built—and legally protected—heritage of Bagamoyo and district, 2019–2020: (A) a derelict 19th century house in the Stone Town district; (B) the town's Arab–German fort, a ticketed visitor attraction; (C) the Arab Tea House, now government offices; (D) the ruined 13th-century mosque at the Kaole archaeological site; (E) the 19th-century German Old Boma building, venue for the *Bahari Yetu, Urithi Wetu* project's community exhibition. (Images: John P Cooper).

Moving to Bagamoyo's beachfront demonstrates immediately the maritime nature of so much contemporary activity in the town (Figure 3A–J). It is here that people build and repair fishing boats, mend nets, prepare for fishing trips, unload and trade their catch, and process, cook, retail and transport it down the consumer chain. In the nearby intertidal zone, those unable to afford boats fish using hand nets or fishing lines; others forage there. Fish porters hurry to boats landing their catch on the beach. Meanwhile, around the customs house, crowds of porters load and unload the wooden cargo *mashuas* that ply back and forth between here and Zanzibar; they take sawn timber, roundwood poles and foodstuffs to Unguja, and bring back goods such as cooking oil. A variety of other wooden boats—logboats and plank-built crafts—lie at anchor or are hauled up to the head of the beach. At dawn or at night, these head out to familiar fishing grounds determined by weather, wind and season. Periodically, a large metal barge arrives from Zanzibar to collect aggregates for construction heaped alongside a small stone jetty. Sometimes, at low tide, a fishing crew recites verses from the Qur'ān and carries out purifying rituals on board their vessel with the hope of improving the catch. Sometimes, also, uniformed school students arrive en masse to play on the beach; the coast is particularly thronged during the Islamic Eids and at Christmas. In the tourist season, tentative groups of foreign visitors pick their way across mooring lines and between market tables.

Most maritime activities are strongly gendered [30,31]: men build and repair boats, fish from them, crew cargo *mashuas* and act as porters and drivers; women (mostly) undertake intertidal gathering, market trading and fish processing. These divisions create gendered space: the sea is overwhelmingly masculine; the market and fish-processing areas predominantly feminine.

This brief word picture conveys only an impression of the vast range of engagements Bagamoyo's maritime practitioners pursue within the oceanic realm that they regard as their principal 'heritage' asset. Materially, these engagements are apparent through the number and range of wooden watercraft visible on the beach and at sea (Figure 4A–H). These include the *ngalawa*, *mtumbwi*, and *mashua ndogo* logboats, and the plank-built *mchoro*, *mashua*, *ngwanda*, and *boti la mtando* that we have documented elsewhere [32,33]. Most of these crafts use sails, most numerous the *ngalawa* and *mashua*. Other, recently innovated vessel types, such as the *ngwanda* and *boti la mtando*, are powered by outboard motors—an indication of changing priorities, fishing strategies and available technologies. The materiality of this marine entanglement is further manifested through arrays of fishing gear, beach-side shelters, stacked porters' buckets, market stalls, auction tables, ice houses, cooking shelters and storage boxes, as well as the motorbikes and small trucks that transport the catch to more distant markets.



Figure 3. The contemporary—and legally *unprotected*—maritime cultural ‘heritage’ of Bagamoyo and district, 2019–2020: (A) a boatbuilder makes repairs to a *ngwanda* fishing boat; (B) a man repairs a purse-sein net on the town’s football pitch; (C) the crew of a motorised *boti la mtando* prepare to depart to fishing grounds with the rising sun; (D) porters carry the catch ashore from arriving *mtumbwi* logboats; (E) I fish frying and selling under shelters at the head of the beach—the district council cleared and relocated these during the period of the project; (F) women collect sea cucumbers (Sw. *majongoo* (sing. *jongoo*)) for export to East Asia; (G) porters land a cargo of cooking oil brought by *mashua* cargo vessels from Zanzibar; (H) fishers drag a *ngalarwa* logboat up the beach for overnight storage; (I) the bulk-cargo ship *Samarra II*, which carries aggregates between the mainland and Zanzibar; (J) a school visit to the beach. (Images: Lucy K. Blue and John P Cooper).



Figure 4. The working watercraft ‘heritage’ of Bagamoyo: (A) the common double-outrigger *ngalawa* fishing logboat; (B) a large *mtumbwi* fishing logboat, being careened; (C) a one-person Nyasa *mtumbwi*; (D) an elaborate *mashua ndogo* ‘logboat’; (E) a double-ended *mchoro* fishing boat, which is increasingly scarce for its dependence on sail; (F) a motorised *ngwanda*, ferrying crew to a *boti la mtando*; (G) a purse-seining *boti la mtando*, getting under way to fishing grounds; (H) two cargo *mashuas*, one being loaded with planks, the other with a cargo of eucalyptus poles. (Images: Lucy K. Blue, John P. Cooper, Javern Aveline Sabas).

For Bagamoyo’s maritime practitioners, their oceanic ‘heritage’ is also manifest spatially. The beachfront itself is organised around the principal marine activities already described (Figure 5). The late-19th century C.E. Customs House sits at a point in a generally shallow and gently sloping bay where slightly deeper water comes closest to the shore: the large cargo *mashuas* put in here. Spatially, these vessels displace the smaller, motorised *ngwanda* and *boti la mtando*, and the larger *mtumbwi* logboats, to anchorages just to the north and south along the shore. In contrast, the plentiful *ngalawa* logboats are mostly hauled to the head of the beach in the evening. The landing on the beach of the returning fishing fleet is the reason the town’s fish auction also takes place there; the retail market and fish-frying shelters sit immediately inland. Small fry (Sw. *dagaa*) are dried on nets set on frames at the head of the same beach. Fishing nets are laid out, checked, and repaired on a large, flat,

sandy area of soccer pitches south of the main port, and also on school sports fields on the road to Kaole. On the northern edge of the town, a broad area of shallow intertidal zone and reef bulges into the sea, truncating the anchorage while creating opportunities for beach fishers, intertidal foragers and sea-cucumber collectors. Those reefs represent the first opportunity for inshore fishing, mostly using ring nets deployed from large *mtumbwi* dugouts. Further out, the many fishing grounds known to the Bagamoyo community are distributed around the reefs, sandbanks and islands of the Zanzibar Channel, the monsoon wind determining the season of access to many of these for those fishers—the majority—whose range is restricted by sail, and so by wind strength and direction.



Figure 5. The principal maritime ‘heritage’ spaces of Bagamoyo, as observed during the *Bahari Yetu, Urithi Wetu* fieldwork. The solid lines outlining anchorages are indicative of zones that, in reality, blend into each other. (Images: Google Earth/John P. Cooper).

Boatbuilders also work along the beach. Quick mends might be completed in the intertidal zone when the tide is out, but more extensive repair and building work is normally conducted at the head of the beach. Further inland, forest and bush offer opportunities to source timber for the construction process, extending the reach of the maritime cultural landscape. If 'heritage' has meaning to the maritime community of Bagamoyo, then it is, crucially, through this spatiality.

Finally, there exists a rich and complex web of intangible culture, knowledge, and cognition. This includes knowledge that is taught and socially transmitted as well as that acquired through observation and embodied experience. It includes craft skills such as boatbuilding; expertise, gained through practice, in sailing, navigation, the setting of a net and the loading of a balanced cargo; and cognitive and experience-based knowledge of, for example, weather patterns, the seasons, sea states, journey durations, the locations and fishing affordances of reefs, the sites of suitable trees for boatbuilding, and so forth. It includes social knowledge of kinships and hierarchies, of rights and responsibilities, of whom has the required knowledge and skills, and of how to seek spiritual help. For the ocean-engaged people of Bagamoyo and its surrounding villages, their oceanic heritage (Sw. *urithi*) includes all of this, and more besides.

Bagamoyo's complex and multi-faceted maritime patrimony has faced upheaval in recent years as a result of central government plans, first promoted by former President of Tanzania Jakaya Kikwete (2005–2015), to build, at a cost of some USD 10bn, the massive BSEZ, comprising a vast modern seaport and associated industries, retail and tourist developments, as well as a new hospital, all centred around the Mlingotini Lagoon, just to the south of Bagamoyo [34,35], ([36], pp. 6–7, 15), [37,38] (Figure 6). This mega-project, backed by Chinese and Omani investment, was the subject of a framework agreement witnessed in March 2013 by President Kikwete and Chinese president Xi Jinping. The scheme went into abeyance after President Kikwete left office, but was revived under President Samia Suluhu Hassan in mid-2021 [39]. Its advocates point to the many employment opportunities and potential for regional and national economic growth that this scheme offers: it would, in the process, impact a huge section of coastline around Bagamoyo, as well as a swathe of the Zanzibar Channel that would constitute its maritime approaches. It would disrupt the activities of fishers and intertidal gatherers in particular, as well as the customary movement of fishing and cargo vessels within the Channel.



Figure 6. Remote sensing image of the Mlingotini Lagoon, marked up to show the approximate scale and zoning of the proposed Bagamoyo Special Economic Zone (in orange), the current anchorages and haul-outs of Mlingotini village (in dark blue), nearby fishing haul-outs (in magenta), and the names of current fishing areas within and outside the lagoon (sky-blue italics). (Image: Google Earth/John P. Cooper).

The government of Tanzania evacuated households in the villages of Mbegani, Pande, Mlingotini and Kondo following the signing of the 2013 agreement in anticipation of groundworks, although people began to return as progress on the project stagnated—initially—following President Kikwete’s departure from office. The BSEZ might yet not be realised, but even so, growth projected for both Tanzania’s economy and population [40], ([41], pp. 22, 57) suggest that further major infrastructure development along the country’s 1400 km of coast is, in any case, inevitable, with transformative implications for coastal communities and practitioners.

3. Retrospective: Formal Engagements with Tanzania’s Maritime Heritage

The maritime character of Swahili peoples has long been a topic of archaeological discourse, with debates ongoing about their origins, emergence as culturally ‘maritime’, and their trans-oceanic connections—implicit, for example, through trade goods and architecture [6,42–49]. However, it is only recently that Tanzania’s maritime and underwater cultural heritage per se has become a direct object of enquiry among academics and heritage professionals. The country’s legislative environment reflects this: the 1964 Antiquities Act, even with its 1979 amendments and subsequent revisions, has nothing to say specifically about maritime and underwater artefacts and sites ([1], p. 530). Even in the first decade of this millennium, Lane [50] could lament the lack of maritime archaeological research in Tanzania. More recently, Mahudi [51], Jeffrey and Parthesius [52] and Ichumbaki [1] have

been able to report capacity-building activity, underwater survey activity, and ongoing discussions around the ratification of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage. The ‘fast-growing field’ of Tanzanian maritime archaeology that Ichumbaki describes by 2015 was necessary, in his words, to address ‘a history which needs not only to be explored and made known to all people of the world ... but also preserved for the benefit of both present and future generations.’ ([1], p. 531,526).

Two factors, above all, have been instrumental in shaping research and policy with respect to maritime cultural heritage in Tanzania. The first has been the government’s long-standing preoccupation with identifying, demarcating, and ‘protecting’ standing ruins on land as archaeological sites under legislation and institutional attitudes shaped in the colonial era ([53], p. 265), [4]. This terrestrial, site-based approach has encompassed several standing coastal ruins of a maritime character ([1], p. 533), [4]: Ichumbaki and colleagues have criticised this site-focused approach, not least with respect to its occasional disregard for pre-existing community relationships with designated sites [4,27,54].

The second factor shaping approaches to Tanzania’s maritime heritage has been the more recent archaeological turn identifying the potential of specifically underwater cultural heritage, and nurturing institutional capacity to develop it [1,47]. To date, this subaquatic development has broadly replicated preoccupations with site seen on land, in that it has focused largely on the deployment of underwater archaeological techniques in identifying and recording submerged archaeological remains [47]. Inevitably, shipwrecks have drawn most attention [51], ([1], pp. 530–532), [55,56]. Tanzania has embarked on a similar trajectory to neighbouring Kenya in this regard, [57–63], while avoiding the controversies surrounding commercial salvage besetting neighbour Mozambique ([52], pp. 170–173), [64,65].

A small number of maritime-oriented archaeological investigations have targeted Tanzania’s intertidal zone, but such research has tended to be an extension of activities at known coastal sites—Kilwa, Songo Mnara and Kaole—beyond their conventional terrestrial boundaries, with the aim of identifying related archaeological features [15,52,53,66]. This persistent focus of interest on the country’s coastal and subaquatic sites, on the methodologies and capacities of their investigation, and on legislative frameworks for their protection, is perhaps unsurprising from the global perspective of maritime archaeology as a professional discipline. But it has left much unaddressed in the Tanzanian context—not least the ‘living’ heritage that is the subject of the present article.

We discern within this trend towards underwater archaeology the extension into East Africa of the epistemological tentacles of modern, globalised and professionalised maritime archaeological theory and praxis that Baillie and Sørensen [18] have noted with a broader African heritage context in mind. What this trend promises for heritage practitioners is clear: it produces new operational realms in which professionals can practise and perform their competence and expertise—in effect, generating or augmenting professionalised life-ways for formally constituted interpreters and narrators. However, what it promises for others—not least Tanzania’s coastal communities—is entirely unclear: it remains remote from the transcendent notion of ocean as heritage that Ichumbaki identified through his polling around Bagamoyo. Researchers have carried out very little work that engages with Tanzania’s contemporary maritime cultural milieu in a way that might mesh with such a holistic grassroots perspective, with its implicit stress on livelihood, praxis and environmental (and hence spatial) tenure. It is true that a small number of archaeologists have engaged with contemporary Tanzanian fishers [67,68], but this has been done primarily to inform understandings of maritime practices evident in the archaeological record, rather than to elicit or advance community heritage agendas per se.

One partial exception to the dearth of scholarly engagement with Tanzania’s contemporary maritime cultures is boatbuilding, where a limited degree of interest has emerged with respect to Tanzania’s contemporary construction practices—mostly from European researchers [69,70] although more recently by the present authors (with other colleagues) [32,33]. Indeed, there has been a history of outsider interest in certain, lim-

ited aspects of local boatbuilding since early last century, often focused on ostensibly ‘exotic’ technologies, such as sewn construction and outriggers, and their imagined origins [71–78]. Much of the colonial-era scholarship on the region’s nautical technologies regarded them through a lens of epistemic hostility and diminution, as we have discussed elsewhere [32]. Moreover, within this engagement more broadly, researchers have rarely, if ever, approached boats and boatbuilding as vehicles of a heritage narrative, let alone of the more-or-less intangible practices and lifeways they enable. In any case, it is fair to say that scholarship on regional watercraft has yet to deliver significant or obvious heritage-coded benefits to communities or individual practitioners themselves—an accusation that Mpunda and Lane ([79], p. 212) levelled against East African archaeology in general almost 20 years ago.

Career professionals have, however, addressed the marine activities of Tanzanian coastal communities in quite a different realm—that of scientific fisheries literature. This has mainly been in the form of consultancy reports by fisheries experts, alongside some academic articles [30,80–82]. However, even in those rare instances where this research has taken an ethnographic turn (e.g., Fröcklin et al. [81], it has retained a focus on professional fisheries management, sustainability and economy, rather than addressing issues of community interests, the historical tenure of maritime space and material or intangible culture. Indeed, within this corpus, the lifeways of artisanal communities are often identified as problematic, as Moshy and Briceson [83] highlight. Addressing forms of knowledge of marine ecology in the region, they point to the persistent gulf between the ‘conventional scientific knowledge’ held by fisheries professionals and the ‘traditional ecological knowledge’ held by artisanal fishers; they lament the tendency of professionals to assume epistemological superiority over fishers. We see a similar gulf existing in the fisheries genre with respect to material culture: we have yet to encounter fisheries-focused literature on Tanzania that engages, for example, with the variety of boat types deployed by artisanal fishers and the types of fishing conducted from each. Fisheries experts Breuil and Grima, for example, write of a Tanzanian artisanal fleet comprising “wooden planked boats, dhows, dugout canoes, and outrigger canoes” ([80], p. 14). The word ‘dhow’ is notably etic spelt this way, while ‘canoe’ in this context is generic and inappropriate ([84], pp. 33–35).

What this overview of researcher engagement with Tanzania’s maritime realm seeks to demonstrate, first of all, is that encounters to date have taken very particular epistemological forms—whether site-based, past-focused and preservation-oriented in the case of heritage professionals, or management-driven and ecology-based in the case of fisheries experts. In both instances, maritime communities and individual practitioners find themselves and their concerns largely marginalised or even problematised within the discourse. What is substantially lacking is an engagement with Tanzania’s coastal communities as themselves custodians and the protagonists of a contemporary maritime heritage narrative. Such an engagement has the potential to extend both scholarly and public perspectives beyond the boundaries of the professionally and legally demarcated archaeological ‘site’ into a much more nuanced and multivocal appreciation of what constitutes Tanzania’s maritime ‘heritage’ today, of what makes it valuable, and of whom should have a say in its future. Uncoupled from notions of site alone, thinking around maritime heritage becomes free to engage with a welter of material culture, associated intangible assets, and customary use of space. What may well transpire is that grassroots notions of heritage drive sharply different priorities from those of a professionalised and globalised heritage agenda—privileging contemporary practice, livelihood, and the search for economic betterment over reification and preservation. This criticism might equally be levelled at the 2001 UNESCO Convention, which focuses on underwater cultural heritage to the exclusion of maritime heritage that is not submerged, that is intangible, or that is part of the material or intangible culture of contemporary daily life; critiques of the Convention have tended instead to focus on its implications for national sovereignty ([85], p. 836), ([86], pp. 838–840). In Bagamoyo and surrounding villages in particular, notions of heritage as livelihood and praxis, and particularly as tenured within a landscape, might find purchase in debates about the future

of the BSEZ project and the communities it might impact. If so, it might cross from the realm of ostensibly innocuous ‘heritage’ into the political domain.

4. The *Bahari Yetu, Urithi Wetu* Project and Its Activities

The *Bahari Yetu, Urithi Wetu* (BYUW) project, of which this article is a product, formed part of the UK-government-funded *Rising from the Depths* network, an initiative that set out to find ways of addressing, celebrating and leveraging maritime heritage for the social benefit of its practitioners and the wider East Africa region [87]. The authors initially identified Bagamoyo and its surrounding villages of Kaole, Mlingotini, Mbegani and Pande as its focus, although this subsequently narrowed, for pragmatic reasons, largely to Bagamoyo and Mlingotini. The project sought to engage with the community in order to understand its maritime heritage priorities; to document aspects of that heritage; to appreciate the issues facing it; to celebrate its lifeways through cultural activities such as a community exhibition and documentary film; to establish a grassroots non-governmental organisation that would represent community interests; and to raise the issue of contemporary maritime heritage with state agencies through a stakeholder event. The project was conceived under the shadow of the BSEZ project—which subsequently appeared to have been shelved throughout the period of the fieldwork itself, only to return afterwards to loom over the community once again.

4.1. Stakeholders—In the Project and the ‘Heritage’

We consider the primary stakeholders in the maritime ‘heritage’ of Bagamoyo and its surroundings to be those with direct breadwinning involvement with the sea, as well as their dependents, who are the creators and protagonists of it. This clearly includes those connected with all aspects of artisanal fishing and intertidal gathering and downstream food processing, as well as cargo traders, boatbuilders, etc. But it also encompasses the wider inhabitants of Bagamoyo and nearby coastal villages, since their immediate experiences are so clearly shaped by the maritime activities going on around them. A secondary group of stakeholders includes those agencies of local and national government that have a direct economic and policy impact, through their respective competencies, on the primary stakeholder group: we include local Beach Management Units (BMUs), national forestry and fisheries agencies, the Marine Parks and National Environment Management Council, planning authorities, taxation agencies, and law-enforcement bodies such as the police, coast guard and military. Other, more indirect, stakeholders include those in service sectors such as tourism, including tourists themselves, and culture, including museums, heritage practitioners, academics, and ‘consumers’ of cultural outputs. Much broader groups also exist, including the general public of Tanzania, who depend existentially on a healthy coastal economy and ecology as key contributor to general food security, as well as the intangible benefits—many of which have yet to be realised—of coastal culture as a contributor to individual, communal and national narratives of self, as well as to wellbeing.

4.2. Approaches and Methodologies

Although the BYUW project addressed ‘research universes’ quite different from the more conventionally archaeological ones that Mapunda and Lane address in their 2004 article on public archaeology in Tanzania [79], it nevertheless built on approaches that Mapunda, in particular, began developing in the country in the early 1990s [88,89]. Broadly, these included inviting contributions to research objectives from local people, involving them in the research process, community appraisal of the project, and the popular publication of research findings through exhibition and accessible media ([79], pp. 215–218). In terms of our engagement with the maritime practitioners of Bagamoyo and environs, we were conscious of the need for epistemic humility, to listen rather than tell, and to appreciate that people are experts in their own experience. In this we were guided by the notion of ‘archaeologies of listening’ expounded by Schmidt and Kehoe [90], and by the wider scholarship around decolonial practice and epistemic authority in general [91–97],

and in Africa in particular [92,94,98,99]. Meanwhile, although this co-productive research process generated learning opportunities for all, the quite different positionalities of the authors as academic investigators meant that epistemic humility had to be conceived and adopted by each of us in different ways, although by all nevertheless.

None of this claim to listening humility permits us also to claim total open-mindedness or an epistemic tabula rasa in constructing and entering the 'field' of Bagamoyo's maritime heritage, however. Our research was, after all, funded by a network that 'aims to identify in what ways the tangible submerged and coastal heritage of Kenya, Tanzania, Mozambique and Madagascar, and its associated intangible aspects, can stimulate ethical, inclusive and sustainable community development in the region' ([87], p. 1026). This situates our project squarely within a longstanding global (and ideological) trend identifying heritage as a 'resource'—in this case for social and economic 'development' ([18], p. 2). Our funding therefore came with the presumption that some notion of 'maritime cultural heritage' would have resonance and value among low-income communities whose very breadwinning activities constituted the object of our knowledge-creation prospectus. The *Rising from the Depths* initiative frames maritime cultural heritage as a potentially 'usable past' [100,101]. In the case of the BYUW project, the presumed object of our interest was, more precisely, an in-use present that is rooted in the past only through customary practice, intergenerational knowledge-transfer, and longstanding spatial tenure, but not through demarcated sites or archaeology.

This focus on contemporary maritime culture meant that our research activities would inescapably impinge on the critical relationship of living people with their marine resources. The principal ethical concerns around this were two-fold. The first was that our engagement should not seek to reify aspects of maritime practice and material culture in a manner that might obstruct peoples' legitimate desire for change in their socio-economic situation and quality of life—demanding from them, as Nora [102] expresses it, the 'repetition of the ancestral' in the service of a professionally designated or 'authorised' heritage discourse (in Smith ([103], p. 11)): Clifford Collard [104] has elsewhere highlighted the risks to community and individual interests of designating as heritage what is, at its core, a livelihood-earning craft activity—in her case, *kente* textile production in Ghana. The second concern—not least in the context of the BSEZ megaproject—was that our research should appreciate and represent the community's maritime practices and usages of land and sea as customary, tenured and existing—the implication being that it should be taken into consideration by decision makers contemplating Bagamoyo's economic and infrastructural future, and indeed by planners as a matter of course. In that respect, the project could not avoid being political in both its activity and potential impact.

Our activities in the field were, first and foremost, ethnographic in nature, and took several forms. Access to the community was facilitated by the fact that one of us (Ichumbaki), together with other UDSM colleagues, had maintained a prominent archaeological and heritage research profile in Bagamoyo and district for nearly ten years, obviating the need for a classic gatekeeper figure. The fact that all Tanzanian researchers speak Swahili, meanwhile, established a *lingua franca* with interlocutors and further facilitated communication; UK researchers (Cooper and Blue) depended during interviews on their Tanzanian colleagues for sequential translation. The UK researchers were present for two three-week field seasons (August 2019 and February–March 2020), while UDSM researchers were present during those periods, in the interim, and subsequently.



Figure 7. Co-creative practices between academic researchers and practitioners included: (A) an initial research co-creation event; (B) ethnographic interactions, including participatory mapping (under way in this image); (C) observation of activities and concurrent interview. (Images: BYUW project; Javern Aveline Sabas; Lucy K. Blue).

Preliminary contacts with elders and prominent figures within the fishing and boat-building community in Bagamoyo, Kaole and Mlingotini were established by Ichumbaki and other UDSM colleagues. Some of these were invited to and attended a research co-creation event held at the Stella Maris Hotel in Bagamoyo in August 2019 at the beginning of the first fieldwork season (Figure 7A). During this event, semi-structured group conversations took place in four focus groups, each addressing a different theme—fishing, boatbuilding, navigation and intangible heritage, respectively—after which all participants came together for a plenary session. The focus-group sessions were semi-structured around topics presented by the researchers, but sought to follow the flow of conversational interest wherever it led. Broadly, the aim was to elicit initial knowledge from participants and identify matters of concern to them as points of research departure. The event provided leads for further ethnographic investigation in the field, and themes around which to structure our planned community exhibition, which was held the following March (2020).

Subsequent ethnographic and co-creative interactions included further semi-structured interviews with maritime practitioners, normally at their place of work along the foreshore, or occasionally elsewhere—for example, at someone’s home or on the margins of the project exhibition (see below; Figure 7B). We generally made contact in a snowballing manner, by word-of-mouth recommendation, or by self-introduction to individuals and groups at work on the beach. We made hand-written notes and audio recordings and took photographs or video (or not), subject to interviewee consent. We observed and interviewed boatbuilders at work, and identified material culture (e.g., boat parts) by pointing and naming (Figure 7C). We identified and named customary fishing areas through collaborative mapping activities; we identified fish species through interview or by observing catch on the beach. We recorded spatial usages of Bagamoyo’s waterfront through direct observation, interviews, and the use of GPS-enabled mobile phones (Figure 5).

In addition to general photography of locations, material culture and activity, we also carried out 3D photogrammetric surveys of watercraft types (Figure 8A): combined with previous research activity in Zanzibar by Cooper, Blue and Alessandro Ghidoni, this resulted—alongside our all-important community collaborations—in an unprecedented documentation of the types of wooden vessels in use in the contemporary Zanzibar Channel [32]. Meanwhile, a fortuitous encounter with master boat-carver, Mr Alalae Mohamed, opened up an unforeseen opportunity for knowledge co-creation: he educated us in his process of building a double-outrigger *ngalawa* logboat—the region’s most common fishing vessel—and allowed us to record this from start to finish (Figure 8B). We were, as a result, able to document Mr Alalae’s craft both in the form of a conventional academic article and as a Swahili-language documentary film (with English subtitles) entitled ‘Ngalawa Making Film’, made by members of the UDSM team: each is openly available online [33]. This engagement served the dual purposes of recording a master builder’s creation of this important vessel in unprecedented detail, while also publicly celebrating both his skills and the *ngalawa* as the region’s most popular fishing vessel.



Figure 8. Data-gathering activities included: (A) photogrammetric recording of watercraft types; (B) video recording of construction methods; (C) UDSM undergraduate students conducting a survey on tourist attitudes to the sea, February–March 2020. (Images: Philip C.M. Maligisu; Tobias Minzi).

We used quantitative methods to elicit opinion only once—in the form of a survey of tourists visiting Bagamoyo that was conducted on behalf of the project by archaeology and heritage undergraduates of UDSM. The poll elicited responses around the degree of tourist engagement with the maritime activities of the town and its waterfront (Figure 8C; Appendix A). What it demonstrated, above all, was a clear interest among visitors in the waterfront activities of the town and a desire to engage with them, not least through boat excursions of one kind or another.

The project's goals of celebrating and communicating the maritime heritage of Bagamoyo and district took the form, in the first instance, of a three-day community exhibition held in March 2020 in the Old Boma, an imposing historic building that overlooks the waterfront area and is currently unused (see below). This free event deployed contemporary and archaeological objects as well as multimedia resources to showcase the lives and work of the maritime community: boatbuilders, mangrove-whelk (*tondo*) collectors and a fisherman were at hand to explain their craft, alongside UDSM master's degree students acting as guides. Visitors included members of the Bagamoyo community, hundreds of schoolchildren, tourists, senior UDSM dignitaries, and an unexpected delegation of government ministers from the Southern Africa Development Community (SADC). Visitors were invited on arrival to give their feedback verbally and through a visitor's book at the end of the exhibition route.

The exhibition transferred to the UDSM campus in Dar Es Salaam in November–December 2020, where it formed the central fixture of a week-long Maritime Week at the University that marked the culmination of the BYUW project: during this week, the *ngalawa*-building documentary was also premiered; UDSM colleagues launched a popular-music video advocating maritime heritage; and a stakeholder workshop was held as a culmination of the project, marking the formal turn within the project towards dialogue with policymakers. The event brought together stakeholders from sectors including fisheries, marine-park services, tourism, the environment, local government, beach-management units, antiquities, the National Museum, National Commission for UNESCO and the private sector. Held on a single day in December 2020, it sought to communicate to participant agencies both the significance of the contemporary maritime heritage of Bagamoyo and its surroundings as forming the basis of a community's livelihood, as well as demonstrating the value—actual and potential—of such activity throughout Tanzania's coastal regions.

The project's plans to establish a formal organisation to represent the interests of maritime practitioners in Bagamoyo crystallised into the formation, in late 2019, of an officially registered non-governmental organisation (NGO) named CHAMABOMA-Bagamoyo (CHama cha Mafundi wa BOti na Mafunzo—Bagamoyo, or the 'Association of Boatbuilders and Vocational Training—Bagamoyo'). A membership organisation, CHAMABOMA-Bagamoyo brings together boatbuilders to advance their collective objectives, which are: providing training opportunities to youngsters; diversifying economic activities; raising the standing of members within the community; and advancing their broader professional interests. The BYUW project, particularly through the efforts of co-authors Maligisu and Robinson, supported the organisation's founding members through the formal governmental registration process and the election of its first officers. Overall, this broad set of methodologies allowed the project to fulfil several of the criteria set out by Mapunda and Lane for successful public archaeology in Tanzania ([79], pp. 215–218): involving local people in co-creation of the research; low-cost publication and dissemination of results on an academic and popular level (in our case, free and online in all cases); and inviting public assessment of the outcomes.

5. Heritage as Livelihood

An etic heritage lens might make easy work of the contemporary maritime milieu of Bagamoyo, and of East Africa more broadly. There are few regions of the world where wooden watercraft—plank-built and logboats—continue to be built extensively by skilled artisans and used in such variety within the maritime economy [32,33]. Our documentation of watercraft in the Zanzibar Channel identified five types of logboat and nine types of

plank-built vessel [32]. There must be still-fewer regions where so many vessels continue to be powered by sail rather than motor—though that is changing (see below). East Africa is, meanwhile, among the last bastions of a ‘clenched-nail’ hull-construction technique once widespread around the western Indian Ocean [32,84], ([105], pp. 156–161), ([106], pp. 44–76), as well as of the use of the settee rig, once equally common ([84], p. 33), ([106], p. 86), ([107], pp. 120–139), ([108], p. 33), ([109], p. 186). Such material practices have largely vanished from other coasts of the western Indian Ocean, including the Red Sea and Arabian/Persian Gulf. Therefore, the East African context—and Bagamoyo within it—appears amply to meet criteria of value, significance and uniqueness typically applied during the conventional professional heritage-assessment exercises [110,111].

It is worth noting in this regard that Iran, in 2011, inscribed its wooden shipbuilding and sailing tradition, centred largely around Bandar Kong in Hormuzghan province, on UNESCO’s List of Intangible Cultural Heritage in Need of Urgent Safeguarding under the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage [112]. The move demonstrates the potential, in principle, for East African governments to pursue a similar inscription strategy with respect to their own intangible/living nautical heritage(s), perhaps under the same convention’s Representative List of the Intangible Cultural Heritage of Humanity [113] (Article 16). In Iran’s case, the inscription is essentially a narrative of endangerment: it cites “diminishing number of practitioners, economic changes, adoption of cheaper manufacturing technologies, and introduction of modern navigation methods [which] combine to threaten the viability of the element” [112] (U.2). Boatbuilders in Bagamoyo themselves expressed confidence for the long-term prospects of their industry during our consultations with them (see below). It nevertheless remains the case that the town’s maritime community situates its wooden watercraft, together with associated material and intangible cultures, within ecologically and economically contingent systems that exist primarily to provide incomes, usually around subsistence level (see below). Material-cultural choices among fishers, and indeed inter-tidal gatherers, are predicated upon optimising catch within the resource constraints of technology, finance and knowledge available to them. Merchants of cooking oil, timber and fresh vegetables likewise choose to ship their goods on sailing-and-motorised *mashua* between the mainland and Zanzibar because it is the optimal option available to them [114]. Should, for example, a modern cargo-ferry link open up or motor technologies change in cost or efficiency, that calculus might also change.

We have no data on the scale and economics of Tanzania’s coastal transport industry that depends upon ‘traditional’ wooden cargo boats—the *mashua*, sailing *jahazi* and motorised *bumu*. At Bagamoyo, we counted more than twenty *mashua* on a single occasion (18 August 2019). Empirical data on Tanzania’s fisheries, meanwhile, is notoriously problematic, in part because the industry is almost entirely made up of small, artisanal fisheries operating on vessels less than 10m in length ([80], pp. 11–12). Haule reported in 2015 that the number of mainland Tanzanians depending on small pelagic (Sw. *dagaa*) fisheries alone is 670,000, or one in every fifth coastal household, and that, even so, small pelagics make up less than half of the total fishery ([115], pp. 28–30). Data from 2010 suggests that mainland Tanzania had 34,320 active fishers at that time, and that that number had increased by almost 5% over the previous two years alone ([80], p. 12). More recent data from Bagamoyo District Council also demonstrates rapid growth more locally: in 2018, the District had 2363 registered fishers—up 28% in a decade. The number of registered fishing boats in that period appears largely unchanged (365 in 2018, versus 374 in 2008), but this might underestimate reality: Tanzania’s 2009 Fisheries Frame Survey concluded that more than 70% of the country’s boats went unregistered at that time ([30], p. 36). Interestingly, the number of registered vessels in Bagamoyo that use a motor had risen by 85% in the decade to 2018; it had almost doubled in the two years since 2016 [116].

What we can draw from these figures—however incomplete—is that Tanzania’s artisanal fisheries provide the livelihoods of a large proportion of the country’s coastal dwellers, and that they are dynamic in terms of technology and practice. When adopting a heritage

perspective, we must also appreciate the maritime world of Bagamoyo and its surrounding district as intrinsic to the economic life of the community. It is therefore a ‘heritage’—if it is to be viewed thus—that is subject to economic and technological drivers, among them the price and availability of fish, the cost and availability of wood, and the affordability of technology such as watercraft, fishing gear made of synthetic materials, and outboard motors. Fishers we interviewed lamented their dependency on the sail and on watercraft types that limited their ability to reach beyond overfished inshore waters [117]. This suggests an ongoing receptiveness on their part to change in their material culture, should the opportunity arise. It also suggests that, from a community perspective, it is one’s *customary right to make a living from the sea* that constitutes the foundation of a grassroots notion of heritage. This is particularly salient in the light of renewed deliberations by Tanzania’s government and parliament over the future of the BSEZ.

6. Pressure Points

Given this indivisibility of heritage from livelihood among of Bagamoyo’s maritime practitioners, the first step to understanding the prospects for the continuation of this heritage lies in identifying the key factors exerting transformative effects on these practices. We see these as follows.

6.1. The BSEZ

Notwithstanding the wider economic benefits that the BSEZ might offer locally and nationally, its implementation would inevitably have a significant impact on the maritime practices currently tenured within the coastal area, as well as adjacent inshore marine areas. The development is, according to schematic views published in the Tanzanian press and online news sites, centred around the Mlingotini Lagoon. The lagoon’s northern portion would be the site of the port itself, together with an adjacent industrial zone, while the southern portion—plus the Kwa Alex spit—is largely earmarked for touristic developments. Should the BSEZ go ahead, it is hard to envisage how any of the fishing activities in and around the lagoon could continue unaffected, whether because these would be directly supplanted, restricted, or relocated. Comparing published schematics of the BSEZ development with the results of our collaborative mapping shows that the fishing areas within the lagoon would all be directly affected, while key landing areas (Figures 6 and 9) would be subsumed within the proposed port and technology park. The need for new shipping lanes to serve the BSEZ would also impact the inshore fishing grounds of Mwamba Mekingwi, and perhaps others further out in the Zanzibar Channel such as the very important Mwamba Kuni. Meanwhile, the impact of such a major coastal development on coastal currents and sediment regimes might have as-yet undetermined knock-on impacts up and down the coast; the dredging of shipping channels might extend this impact further offshore.

Benefit trade-offs are inevitably required in the development of a megaproject such as the BSEZ, with the tenured practices of maritime communities weighed against broader calculations of the public good. Taha ([118], p. 128) notes, however, that heritage concerns are often sidelined in the planning and execution of such projects, while displaced local communities often find themselves worse off.



Figure 9. Areas of the Mlingotini Lagoon that would be affected by the Bagamoyo Special Economic Zone project include the waterfront and anchorage at Mlingotini village (A), where boatbuilding (B) also takes place; and (C), the Bandari ya Poteza haul-out and mooring area. (Images: Lucy K. Blue, John P. Cooper).

6.2. Fisheries Sustainability

The problem of overfishing in Tanzania's inshore waters is apparent to fishers, fisheries professionals, and government fisheries agencies alike. Several fishers who contributed knowledge to the BYUW project noted the problems of dwindling catch, overcrowded fishing grounds, and the consequent need to venture further afield [119]. Such anecdotal observations resonate with formal fisheries reports, which conclude that Tanzania's inshore waters are overexploited ([80], pp. 9, 12), ([30], pp. 3, 11–12, 53, 71, 72). These reports express concerns around unrestricted access to fishing—fishers and boats must be registered, but the number of registrations is unlimited ([30], p. 41), ([80], p. 33), [119]—and widespread illegal fishing practices, such as beach seining and ring netting in waters less than 50 m deep ([80], pp. 13, 27, 29, 37). A former problem with the use of dynamite has been reduced ([67], pp. 7, 13–15), ([80], p. 37), although not eradicated [120]. Fishers nevertheless argue that they face continued pressure from the authorities—for example, via the local Beach Management Unit (BMU)—to abandon proscribed fishing methods that they argue are the only means available to them to make a living. Episodic enforcement action by the government has even included instances of boat burnings by the army—for example in Bagamoyo in May 2019. Hence, the livelihood practices of the fishers of Bagamoyo and elsewhere—whether seen through a heritage lens or not—exist in tension with national fisheries policies, as well as facing more fundamental issues of the sustainability of the marine resource.

6.3. Technological Change

The availability of new technologies—among them new vessel types, new varieties of fishing gear using synthetic materials, and the outboard motor—are driving change in the material culture, fishing knowledge and spaces of practice among the maritime communities of Bagamoyo. Larger, plank-built artisanal fishing vessels, in particular, are transitioning away from double-ended hull forms powered by sail towards transom-sterned sailing vessels able to take outboard motors to supplement the sail or supplant it entirely: data from Bagamoyo suggests that the number of motorised fishing boats there increased by 85% in the decade to 2018 [116].

The trend towards the outboard motor in larger wooden fishing craft provides improved safety at sea, greater speed and range for day fishing, as well as access to fishing grounds upwind that would normally be accessible only seasonally. Meanwhile, a larger-capacity hull (thanks to the transom stern) and a deck area unencumbered by masts and rigging also enable these new crafts to deploy novel fishing techniques such as purse seining, requiring larger crews (Figure 4G). Hence it can be seen that whatever constitutes 'the heritage' in terms of boatbuilding and fishing practices, this is already undergoing change, driven by economic interests and fishing strategies.

The common *ngalawa* logboat (Figure 4A) has so far proven largely resistant to change: although a few now have outboard motors, most still use the sail. However, some fishers using the *ngalawa* report that what prompts them to persist with the sail is not a notion of heritage, but rather their inability to afford an outboard motor. That suggests a certain vulnerability of the *ngalawa* to the legitimate ambitions of the fishing community for improvement in living conditions.

Such changes in the core nautical technologies of Bagamoyo's fishing community have several ramifications for concepts of 'heritage': for boatbuilders, it has meant marked changes in required knowledge and skills. Active builders report that most current demand for plank-built boats is for the outboard-motorised *ngwanda* and *boti la mtando*, rather than the sailing craft. One builder reported dwindling demand for the double-ended *mchoro* (Figure 4E), and described its hull as more difficult to build than transom-sterned vessels with which he was more familiar [121]. In contrast, two retired builders with long experience of building *mchoros* described them as the easiest of all to make [122].

The implication of these trends is that, in the future, the sail will become increasingly restricted in the fishing fleet to the smaller *ngalawa*—the 'entry-level' fishing vessel of lower-

income fishers—and some *mtumbwi* logboats (Figure 4B). But continuity is not guaranteed even there, should motors become more readily available. Outside of fishing vessels, the sail is mainly used by the larger cargo-carrying *mashua* trading between Bagamoyo and Zanzibar (Figure 4H): *mashua* skippers report a good business, with the combination of outboard engine and sail enabling them to make the crossing in most conditions while economising on fuel. Again, this might change.

6.4. Availability of Timber Resources

The makers of wooden boats in Bagamoyo, and no doubt the rest of the coast of Tanzania, have in recent decades found themselves increasingly subject to national laws and policies restricting access to forest trees, and to some species in particular: they say that some of the ‘best’ timbers are no longer available to them [32,123]. For example, builders of plank-built vessels identify a number of species that were once prized as particularly appropriate to specific hull parts, such as African teak (*mninga*; *Pterocarpus angolensis* ([124], pp. 40, 422–433)) for planking, and red mangrove (*mkoko*; *Rhizophora mucronata* ([125], p. 399), ([126], p. 181), ([127], p. 18); ([128], p. 135) for framing timbers. The species used for planking today are instead *mnondo* (also known as *mtondo(ro)*; *Julbernardia globiflora* ([124], pp. 41, 306–307)), mango, types of eucalyptus (*mkaratusi* ([125], pp. 39, 252–261)), looking-glass mangrove (*msikundazi*; *Heritiera littoralis* ([125], pp. 548–549); ([126], p. 181)) and *mkurungu* (*Pterocarpus chrysanthrix*; ([124], pp. 31, 214)). A carver of logboats named preferred tree species that are no longer easily available, such as *mkungu* (*Terminalia catappa*; ([124], p. 40), *mkenge pori* (*Albizia* Sp.; ([124], p. 39)), *mjani mpana* (literally, ‘broad leaf’) and *mg’ong’o* (marula; *Sclerocarya birrea* subsp. *Caffra*; ([124], p. 40)). Today, mango is the main timber species for logboat hulls, with cashew preferred for the distinctive *kasama* prow-timber of the *ngalawa*: both these species are, of course, primarily cultivated for their fruit, and are not ‘wild’ forest species [32,33]. Such changing timber-species availability affects both builders’ craft knowledge and their relationships with timber suppliers.

Boatbuilders report increasing timber costs in recent years—no doubt, in part, a function of forestry restrictions and rising demand for timber more generally [129]. One builder we interviewed remained confident, however, that such price rises had not impacted their industry, and would not in the future. Those we consulted remained confident also in the future of the wooden-boat-building industry in general, even though forms are changing.

6.5. Tourism

The tourist industry currently provides limited direct benefit to Bagamoyo’s maritime communities: the estimated 17,000 annual visitors to the town (before the COVID-19 pandemic) provided income for the town’s few restaurants and hotels, and generate some demand for fish (Figure 10A,B), but their revenue impact is far less than that in nearby Zanzibar, where a pervasive tourism industry creates employment in the hospitality sector, extensive retail opportunities, restaurant demand for premium fish species, and demand for motorised *ngwanda* for use as leisure boats. Bagamoyo’s tourists, in contrast, tend to stay for short periods as they transit to and from Zanzibar, as two hotel managers told us separately [130] and our own surveys show (see Table A1, Appendix A).



Figure 10. Aspects of tourism in Bagamoyo and environs: (A) Western tourists are guided through the heart of the working beach at Bagamoyo; (B) a couple record an evening on the beach; (C) a beach-front hotel at the south end of Bagamoyo's waterfront—note the absence of fishing or boat-building activities; (D) a sign in Swahili outside the Bomani Bungalows hotel in Mlingotini claims “It is forbidden to stay in the [beach] area when guests arrive”. (Images: Philip C.M. Maligisu, John P. Cooper).

The comparative lack of tourism development in Bagamoyo means also that the fishing and inter-tidal gathering community has so far avoided the pressures of extensive tourist-oriented waterfront development, which in Zanzibar have displaced low-income fishing communities. Some waterfront hotels exist on the northern and southern reaches of Bagamoyo (Figure 10C), and tracts of cleared mangrove to the north show where sea-frontage has been acquired for more. Where hotels do already exist, the beach immediately in front is normally notably empty of artisanal activity, although community members reported that they do not yet feel pressure on working space.

The relationship between maritime practitioners and tourists in Bagamoyo can be frosty, nevertheless. A sign facing the beach outside one waterfront hotel in Mlingotini—written only in Swahili—told its readers to make themselves scarce, should guests seek to use the beach (Figure 10D). The menu of another in Bagamoyo proudly informed its guests that it did not sell local fish, citing unsustainable fishing practices. Meanwhile, direct interactions between tourists and local marine practitioners remain limited: while tourists surveyed by the project showed a keen interest in boat trips (Table A1), there were few obvious opportunities to experience these. Meanwhile, there exists a chasm of misunderstanding between tourists seeking to photograph people at work on the waterfront and practitioners themselves: the latter often resent the intrusion and objectification.

6.6. Climate Change and Coastal Erosion

The impact of global climate change and associated changes in the temperature, level, acidity and currents of the sea is no doubt as much at play in Bagamoyo District as elsewhere along the coast of East Africa [131–134]. The impacts of these developments on pelagic and demersal fisheries are only beginning to be assessed ([135], pp. 188–189), [136], although coastal erosion is already apparent along Bagamoyo’s waterfront ([132], p. 63): wave action has eroded part of the foundations of the Customs House, while archaeological materials are eroding onto the beach at nearby Winde. Between our August 2019 and February–March 2020 field seasons, a large erosional cliff could be seen to have formed along the sands of the northern portion of Bagamoyo’s beach, assisted by the *kaskazi* (NW) monsoon winds. Meanwhile, farmers in the villages of Kaole, Winde, Mkadini, Mlingotini, Kondo and Pande report decreasing soil quality, something they attribute to increasing seawater penetration. A comprehensive understanding of the impact of coastal change on the maritime community of Bagamoyo and district is beyond the scope of this project. However, given what is known about the threats of global heating to East Africa’s coastline in general, the prospect of significant disruptions is clear.

7. Heritage Strategies for Community Benefit

7.1. Raising Awareness

If the heritage lens is to bring benefit to the maritime communities of Tanzania in general—and Bagamoyo and its surrounding villages in particular—the first steps in that direction must, following Thurley’s ‘heritage cycle’ model ([135], p. 26), be towards awareness raising and a public celebration of the value of that heritage, and the interests and concerns of its practitioners. According to Thurley’s model, better understanding of a ‘heritage’ should lead to it being valued, and thence to its care. To that end, the authors organised a free, three-day community exhibition in Bagamoyo’s Old Boma building in March 2020 targeting the maritime community itself, school children, the public and tourists (Figure 11A). By good fortune, it was also visited by the labour and youth-affairs ministers of the 16-member SADC, who happened to be meeting in Bagamoyo at that time.

The exhibition was held in the ground-floor porch and four rooms within the vacant Old Boma building, with space outside allocated to displaying working boats (Figure 11B). The exhibition was arranged as a walk-through route, with guides—maritime practitioners themselves, together with students on UDSM’s Archaeology & Heritage master’s programme—providing interpretation and discussion of the displays and artefacts, rather than relying on self-guided progress (Figure 11C). The porch area housed a welcome table, with one side of the space dedicated to boatbuilding and the boatbuilders of the newly formed CHAMABOMA-Bagamoyo (Figure 11D); the builders demonstrated the use of various boatbuilding tools and explained construction. The other side of the porch was dedicated to the theme of maritime life as well as to the WANawake Utamaduni na Tondo in Kaole (WAUTO-Kaole) women’s NGO and their work as *tondo* collectors and basket makers (Figure 11E). The first (and largest) room within the building was dedicated largely to further themed displays—watercraft, fishing, history, and ‘challenges’—comprising photographs selected from historic archives or images from the project’s fieldwork (Figure 11F). A table within the room displayed ceramic and glass underwater archaeological finds from near Kilwa. Two further rooms contained video projectors—one showed a *ca.* 10-minute montage of Mzee Alalae Mohamed’s construction of a *ngalawa* fishing vessel [33], while the other showed drone footage of the Bagamoyo waterfront—a fly-over perspective not normally seen by local people (Figure 11G). A corridor connecting them contained a range of fishing gear including nets and a traditional fish weir, with a retired fisherman explaining their function (Figure 11H).



Figure 11. The *Bahari Yetu, Urithi Wetu* exhibition at the Old Boma building, Bagamoyo, March 2020. (A) Visitors included members of the fishing community; (B) boats on display outside; (C) schoolchildren shown around by UDSM team member Sinyati R. Mark; (D) boatbuilder Juma Kibuyu explains his work; (E) women of the WAUTO-Kaole collective show their basketwork to UDSM vice-chancellor William A.W. Anangisye; (F) UDSM master's student Miza Alex shows visitors round themed displays; (G) one of two 'cinema rooms', this one showing drone footage of the Bagamoyo waterfront; (H) retired fisherman Mzee Sehesha explains fishing equipment to visitors (Images: Lucy K. Blue; John P. Cooper; Tobias Minzi)

The exhibition was free and non-ticketed to minimise barriers to participation and maximise footfall. One inevitable consequence was that establishing data on visitor numbers was more challenging, although master's students from UDSM did keep a visitor log at the entrance, and visitors were encouraged to complete a visitors' book on departure. The event was visited on the first day by several groups from nearby schools, comprising more than 300 students, mostly of primary-school age; the SADC delegation visited on day two. Visits by the public continued throughout. The exhibition was also attended by the Vice Chancellor of the University of Dar es Salaam (Figure 11G), the District Commissioner of Bagamoyo District and several other government officials visiting Bagamoyo. Some visitors commented in the visitor's book that the exhibition should become permanent; school teachers recommended that, at least, a temporary exhibition should become an annual event.

In order to reach an even broader cross-section of the public, the BYUW exhibition relocated in November–December 2020 to the campus of the University of Dar es Salaam. It was opened in this instance by the Director General of the National Museum of Tanzania, and ran for over a week. The exhibits included all the content presented in Bagamoyo, including the *ngalawa* built by Mzee Alalae. One key event in the week was the premier of the *ngalawa*-building documentary, made by members of the UDSM team, which was officiated by the Director of the Tanzania Film Board [33]. The other was the launch of the *Bahari Yetu* music video in the popular *Bongo Flava* genre, emphasising the importance of marine cultural heritage. This was the product of a separate, music-oriented outreach project led by Ichumbaki and starring Tanzanian artists Chemical, Centano and Honest [137]. That launch was officiated by the Director of the Tanzania Arts Council.

7.2. Organisation and Empowerment

Establishment of CHAMABOMA-Bagamoyo was the main legacy-focused outcome of the BYUW project, involving as it did the foundation and registration of a legally constituted NGO. CHAMABOMA is steered by a committee of boatbuilders resident in Bagamoyo who are elected by its membership—currently more than 20 individuals—all of whom are boatbuilders working in the district. The organisation was established to give boatbuilders a voice and promote their long-term interests. According to its articles of association, the organisation's goals are: to foster togetherness among boatbuilders; to generate income through contractual boatbuilding work and running touristic activities; to train the next generation in boatbuilding; to collaborate with governmental and non-governmental organisations in protecting the coastal environment and heritage; to access loans and other support from various institutions to support the organisation's core activities; and to become a hub for the promotion of maritime issues in Bagamoyo and beyond. CHAMABOMA also took on ownership of the *Bahari Yetu*, *Urithi Wetu ngalawa*, the aim being for members to use the vessel to offer leisure trips, accessing the untapped demand revealed through our tourist survey (Table A1). Despite the impact of the COVID-19 on tourism-related activities, CHAMABOMA has nevertheless progressed well in terms of building capacity and generating income through boatbuilding. By late 2021, it had secured a commission to build two large wooden boats, each costing over USD 30,000 (Figure 12).

7.3. Planning and Policy Engagement

BYUW was conceived primarily as a grassroots, community-focused project, rather than as a national or regional heritage-policy forum: in the spirit of Mapunda [88,89], Mapunda and Lane [79] and Thurley [137], it aimed at co-creating knowledge and understanding of the maritime cultural patrimony of Bagamoyo and district as a first step towards its being valued as a 'heritage' resource within, and especially beyond, the community itself. In that light, while the project did not seek to develop policy models per se, it did nevertheless seek to engage policymakers by representing Bagamoyo's contemporary maritime world as something that had both socio-economic value on its own terms as well as additional value as a heritage resource. It is to be hoped that the various cultural

outputs of the project—the Bagamoyo exhibition, the UDSM Maritime Week, the academic articles, the documentary film, and various media engagements—together with Ichumbaki et al.’s subsequent music-video work [138]—will continue to influence policymakers as much as the wider public beyond the limited lifetime of this project. We nevertheless also aimed to communicate our findings and activities directly to policymakers and other stakeholders as a dedicated event, scheduled at the heart of the UDSM Maritime Week in November/December 2020. Participants at the workshop involved stakeholders from various institutions that interface with heritage, and with maritime contexts in particular. The represented institutions from Bagamoyo included the Culture, Tourism, Fisheries, and Forestry Departments of Bagamoyo District Council, as well as the local Beach Management Unit, and NGOs WAUTO-Kaole and CHAMABOMA. On a national level, the workshop saw representation from the National Museum, Marine Park Services, Department of Antiquities, Tanzania Tourism Board, Ministry of Fisheries, and the Tanzanian National Commission for UNESCO (Figure 13).



Figure 12. One of the boats under construction by members of the CHAMABOMA-Bagamoyo boat-builders’ collective, which was founded with the assistance of the BYUW project (Image: Elgidius B. Ichumbaki).



Figure 13. Delegates at the stakeholder workshop held at the University of Dar Es Salaam, December 2020. (Image: Javern Aveline Sabas).

Finally, it was not a credible aspiration of the BYUW project to influence national decisions on whether or not to proceed with the BSEZ scheme. Indeed, the project appeared to have been shelved at the time of our fieldwork. Nevertheless, our co-creative work in Bagamoyo has succeeded in documenting, to some extent, a heritage tenured within a landscape that may soon disappear as a result of that scheme. It is to be hoped, moreover, that the heritage-affirmation work that we have carried out, alongside our engagement with national policymakers, might contribute to a process by which the tenured practices and material cultures of coastal communities is more actively considered by planners and policymakers across a range of sectors in future.

8. Conclusions

Focusing on the town of Bagamoyo and its surrounding villages, the *Bahari Yetu, Urithi Wetu* project proposed engagement with contemporary artisanal activities in this part of coastal Tanzania through a lens of maritime ‘heritage’—viewing these as having a narrative and cultural value beyond that of their fundamental breadwinning functions. There is much to be found in the intangible and material culture of the fishing, fish-processing, trading and boatbuilding communities of the area that readily meet universal criteria of globally important patrimony expounded by the professional heritage sector: much of what is found today in Bagamoyo, and East Africa more generally, has already disappeared from much of the rest of the Indian Ocean littoral. It is easy, in such a context, to attribute ‘endangered’ or ‘last-surviving’ status to these practices, and to seek to identify them as part of a globally significant heritage with universal value to humanity—demanding, as a result, preservation, conservation, and protection.

There is danger, however, in saddling the communities of places such as Bagamoyo with the involuntary responsibility of custodianship of a reified heritage that has its value reckoned by others—in terms, for example of its rarity, endangeredness and connections with a technological past [99,102]. Baillie and Sørensen ([18], pp. 6–7) have warned elsewhere against the promotion of ‘crisis narrative[s]’ with respect to Africa’s heritage, highlighting its paternalistic tone and presumption that local residents are ‘not able to steward their resources’. Henderson et al. also warn that ‘the simple preservation of ways of life is not an option and would only serve to fossilise [communities] in poverty’ [87]. A strategy towards such heritage that prioritises reification of material form and practice would therefore be a de-facto act of hostility against the practitioner community. It would also be destined to fail, since the material targets of that reification lie within the productive competence of the community itself, and not heritage professionals.

A heritage-making lens turned upon the lifeways of Bagamoyo’s maritime communities soon comes up against the truth that theirs are fundamentally breadwinning activities subject to the unsentimental and transformational pressures of economy, ecology and society. We recall that community members responding to Ichumbaki’s polling identified their greatest heritage asset as ‘the ocean’—a concept with a clear implication of present and future resource dependency. We note also the evidence—documented by the project here and elsewhere [32]—of changing technologies and forms already under way in the artisanal fleet in recent years, as well as the unsentimentality of some participating community members towards present technologies, such as the sail.

Rodney Harrison ([139], p. 35) asserts that heritage making, in reality, comprises practices that “are fundamentally concerned with assembling and designing *the future*” (our emphasis), only drawing upon notions of the past for the purpose of creating resources for future benefit. He points to the ‘new heritage’ paradigm proposed by Holtorf and Fairclough [140], according to which heritage is not a fixed entity, but mutable, and emerging through dialogue. Taking Bagamoyo as a proxy for so many places along the Tanzanian, and indeed Swahili, coast, it becomes clear that heritage discourse must be grounded in the priorities of the practitioner community. Within such a paradigm, the role of the heritage professional is not so much to identify and define the heritage, as to support and facilitate community members in developing their own notions of heritage as a resource that delivers meaningful benefit for them. The *Bahari Yetu, Urithi Wetu* project did indeed seek to document contemporary material-cultural heritage in fairly conventional academic forms—through journal articles and documentary film-making [32,33]. But it also sought grassroots engagement with community concerns. Co-creative cultural activities such as the Old Boma exhibition and ngalawa-building documentary film and music video, affirmed and celebrated maritime lifeways. Collaborative economic activities such as the building of the *ngalawa* also produced a vessel that enabled new income-generating opportunities in the form of recreational daytrips. The project’s assistance of boatbuilders in founding the CHAMABOMA-Bagamoyo NGO enabled artisans to organise themselves into a collective that could represent their interests, train young builders, exchange knowledge and participate in collaborative builds. With this time- and funding-limited project now at an end, its long-term legacy—as with so many development and heritage projects—is difficult to gauge, and may only become apparent with the passage of time. But any success should be measured in terms of the way the community values and represents itself and its heritage in future in the way that it sees fit, rather than according to some externally devised, and externally imposed, heritage criteria.

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Appendix A

The following table summarises the quantitative results of a survey carried out among tourists in Bagamoyo in February–March 2020, carried out by UDSM students using a questionnaire prepared by the authors. Participants were approached in public areas of Bagamoyo town centre and invited to complete the questionnaire, according to principles of informed consent and voluntary participation. The results are referred to within the article text.

Table A1. Statistical summary table of survey carried out among tourists visiting Bagamoyo in February–March 2020.

Question	Category	%	Average
What is your age?	18–25	24	-
	26–35	27	-
	36–45	15	-
	46–55	20	-
	56–65	8	-
	Over 65	7	-
What is your gender?	M	55	-
	F	45	-
Where are you from?	Tanzania	9	-
	Other Africa	14	-
	Europe	50	-
	Americas	17	-
	Asia	4	-
	Australasia	4	-
How many times have you visited Bagamoyo?		-	1.4
How many days have you been here?		-	2.8
How many days will you stay in total?		-	6.2
Where are you staying?	Hotel	63	-
	Hostel	4	-
	Camping	8	-
	Private House	15	-
	Other	12	-
Who are you travelling with?	Family	35	-
	Friends	38	-
	Work colleagues	12	-
	Alone	9	-
Where will you visit while you are here?	The beach	86	-
	The fort	42	-
	Kaole ruins	53	-
	Caravanserai	30	-
	The Old Boma building	39	-
	A church	48	-
	A mosque	13	-
	Fish market	47	-
	Cafés	27	-
	Bars	23	-
	Restaurants	50	-
	Gift shops	33	-
	Wildlife attractions	13	-
	Tourist Office	13	-

Table A1. Cont.

Question	Category	%	Average
How did you find out about these places?	I've been here before	13	-
	Walking around	11	-
	Family or friends' recommendations	32	-
	From local people	24	-
	Guide book	18	-
	Internet	18	-
	Swim	47	-
What will you do while you are here?	Relax on the beach	55	-
	Exercise on the beach	15	-
	Make a religious visit	14	-
	Visit historic places	83	-
	Go to a nightclub	3	-
	Go fishing	3	-
	Go on a boat	15	-
Which of the following would you consider doing in Bagamoyo if they were available?	Go on a short boat trip (1–2 hrs)	53	-
	Go on a fishing trip by boat	38	-
	Go on a snorkelling trip by boat	40	-
	Visit an island by boat	57	-
Would you prefer this to be On a traditional boat with sail?	50	-
	... On a traditional boat with engine?	26	-
	... On a modern boat with engine?	10	-
	I don't mind.	22	-
[Total respondents: 92]			

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