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Exploring common dialectical tensions constraining collaborative communication required for post-2020 conservation

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ABSTRACT

Contemporary conservation requires improved collaboration characterized by greater recognition and incorporation of multiple and diverse actors. Effective communication is central to this endeavour. However, the expression of concerns, perspectives, and the exchange of knowledge between actors and across multiple scales (i.e., *collaborative communication*), must navigate inevitable competing systems of meaning and motivation (i.e., *dialectical tensions*). Yet, a lack of understanding of how to improve collaborative communication within conservation interventions persists within the literature. Consequently, this paper reviews relevant literature to propose a framework that identifies common sources of dialectical tensions in collaborative conservation interventions that if managed effectively can improve required collaborative communication. The framework is then revised based on interviews conducted with 277 respondents in three African coastal-marine collaborative conservation interventions. Findings reinforce the effect of continued marginalization of certain actors' 'voices' within governance processes. More specifically, enabling collaborative communication requires managing several identified institutional-, agenda-, cultural-, and perception-based tensions. In particular, tensions emerging from *formal-informal* institutional interactions; *gender-based* exclusion; conflicting *livelihood-ecological* and *economic-environmental* agendas, and *project-funder* objectives; between *indigenous/local-scientific* knowledge and values; and perceived *necessary-acceptable* change. Furthermore, specific local-scale tensions identified included those associated with *local-customary* institutions; *democratic-meritocratically* elected local representatives; and exclusion based on *cultural diversity*. Consequently, these tensions require the 'co-creation' of communicative strategies amongst all actors to promote greater social equity that better aligns with local priorities to achieve 'positive' post-2020 ecological and social outcomes. Findings should be relevant to diverse conservation actors, and many others working within multi-stakeholder environmental interventions.

1. Introduction

Contemporary conservation is required to tackle 'challenges' beyond biodiversity loss, notably climate change and poverty, and do it in a more socially equitable way (Bennett et al., 2021; Dawson et al., 2021). Furthermore, the Covid-19 pandemic has affected collaborative governance by increasing the vulnerability of many resource-dependent communities (Roe et al., 2020; Walters et al., 2021). Therefore, improved collaborative governance requires understanding how to promote effective collaboration, particularly conflict resolution, amongst all actors affected and affected by interventions (Bodin et al., 2020; Fisher et al., 2020). The term collaborative governance is used here to consider, "an integrated group of stakeholders working together

to design and implement interventions and governance regimes" (Fisher et al., 2020: p539).

Recent research recognizes in particular that post-2020 conservation 'success' requires incorporating the knowledge and priorities of Indigenous Peoples and Local Communities (IPLCs) (e.g., Dawson et al., 2021; Walters et al., 2021). Accordingly, the Convention on Biological Diversity's (CBD) Post-2020 Global Biodiversity Framework (post-2020 GBF) stipulates the urgent need for, "an unprecedented degree of collaboration and whole-of-society engagement" (CBD, 2020: p3), and specifically calls for, "the full and effective participation of indigenous peoples and local communities" (CBD, 2020: p7), to achieve its objective to reduce biodiversity loss and sustainably meet the needs of people.

Communication is central to promoting required collaboration. Yet, a

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lack of understanding of how to improve collaborative communication within conservation interventions persists within the literature. *Collaborative communication* within the context of conservation interventions can be defined as the expression of concerns and perspectives, and the exchange of knowledge between multiple actors, across multiple scales, that is required to deliver ‘positive’ social and ecological outcomes. Therefore, collaborative communication includes communication within the same group (e.g., within a local community), and between different groups (e.g., between a local community and a non-governmental organization - NGO) (Crona and Bodin, 2006; Barnes et al., 2019). Consequently, this paper contributes to discussions on how to enable required collaborative communication within conservation interventions.

The field of *environmental communication* attempts to identify and analyze “the failures, distortions, and/or corruption in human communication about environmental concerns”, and recommend alternatives to improve “human and biological wellbeing” (Cox, 2007: p18). Despite progress to this end, numerous scholars acknowledge greater understanding of complexity in environmental communication, and the production of practical knowledge useful beyond academia, is required (e.g., Cox, 2015; Besley, 2015; Comfort and Park, 2018). Accordingly, this paper heeds this call and attempts to contribute to this endeavour.

Collaborative communication is subject to inevitable *dialectical tensions*, which are, “competing systems of meaning (discourses) that are constituted in and through communication” (Baxter and Scharp, 2015: p1-2). Accordingly, this paper employs a dialectical tension ‘lens’ to better understand how to enable collaborative communication. Firstly, relevant literature is reviewed to propose a framework of common sources of dialectical tensions encountered in collaborative conservation interventions. Secondly, this framework is applied to three African collaborative coastal-marine conservation interventions. Thirdly, these case study findings lead to a revised framework and inform recommendations for managing dialectical tensions to enable collaborative communication in post-2020 conservation.

2. Dialectical tensions in conservation

Recent literature emphasizes that effective communication among diverse actors is central to conservation ‘success’. In particular, important aspects of communication in conservation include the framing of messages (e.g., Kidd et al., 2019), the marketing of interventions (e.g., Green et al., 2019), and resolving conflicts (e.g., Kamil et al., 2020). Nevertheless, a deeper understanding of the complexities of collaborative communication is required. Accordingly, this section explores the relevant literature to emphasize the usefulness of taking a dialectical perspective, and introduces and subsequently proposes a framework to better understand common sources of dialectical tensions that if managed effectively can enable required collaboration.

2.1. Dialectical perspectives

Dialectical perspectives consider discursive and material ‘tensions’ associated with institutions (Hargrave and Van de Ven, 2017). Furthermore, these dialectical tensions reveal “opposites [that] mutually define each other rather than develop separately” (Putnam et al., 2016: p75). However, the two opposing poles of a dialectic tension are not always equal, and their effective management requires addressing imbalances in power (Baxter, 2011; Baxter and Scharp, 2015). Therefore, taking a dialectical perspective can assist in identifying communication issues that may exist between actors identifying with opposing viewpoints, especially those in power and those expected to follow, and can highlight potential strategies to mitigate these issues and the effect they can have on effective governance of interventions. Moreover, it should be acknowledged that dialectical systems can involve multiple intersecting components, and therefore, are often more complex, and cannot be studied reliably in isolation (e.g., Martin and Nakayama,

1999; Baxter and Scharp, 2015). A brief introduction is now provided to four dialectical studies, and some of their proposed dialectical tensions, which provide useful insights on how to better enable collaborative communication within conservation.

Relational dialectic theory (RDT) is particularly influential to understanding dialectical tensions (e.g., Baxter, 2011; Baxter and Scharp, 2015). RDT assumes relationships are nonlinear and characterized by changes, that tensions are fundamental to relational life, and that communication is central to organizing and negotiating relational tensions (Baxter and Scharp, 2015). Furthermore, RDT notes that power resides both within individuals, and, the context, goals, and discourses at play. Baxter and colleagues identify five key relational dialectical tensions, each characterized by two opposing ‘poles’ associated with: *integration-separation* (i.e., of actors and actor groups); *expression-nonexpression* (i.e., the ability of different actors/groups to express opinions); *stability-change* (i.e., concerning meanings and an actor’s relational position); *similarity-difference* (i.e., of actor characteristics and opinions); and *ideal-real* (i.e., associated with the different normative beliefs of actors) (Baxter and Scharp, 2015 - Table 1).

In addition to power, dialectical tensions are often ‘culturally-grounded’. Accordingly, (Martin and Nakayama, 1999: p15-18) propose six dialectical tensions within intercultural communication: *culture-individual* (i.e., shared cultural aspects and individual idiosyncrasies), *personal/social-contextual* (i.e., how people communicate based on the particular context), *differences-similarities* (i.e., notably how actor differences have implications for power relations); *static-dynamic* (i.e., the ever-changing nature of culture and cultural practices), *present-future/history-past* (i.e., the ability to balance both an understanding of the past and the present and how it affects communication), and

Table 1

A summary of key scholars and dialectical tensions deemed relevant to enabling collaborative communication in conservation interventions.

Scholar(s)	Dialectical Tensions
Baxter and Scharp’s (2015) dialectical tensions within relationships	<ul style="list-style-type: none"> ● integration-separation ● expression-nonexpression ● stability-change ● similarity-difference ● ideal-real
Martin and Nakayama’s (1999) six dialectical tensions of intercultural communication	<ul style="list-style-type: none"> ● culture-individual ● personal/social-contextual ● differences-similarities ● static-dynamic ● present-future/history-past ● privilege-disadvantage
Porter et al.’s (2018) four dialectical tensions of climate change controversy	<p>Diagnostic tensions:</p> <ul style="list-style-type: none"> ● complexity-simplicity ● certainty-uncertainty <p>Prognostic tensions</p> <ul style="list-style-type: none"> ● legitimacy-illegitimacy ● normativity-truth
Hoelscher’s (2019) dialectical tensions of inter-organizational change	<p>Commitment-based tensions:</p> <ul style="list-style-type: none"> ● collaborative-competitive ● scepticism-optimism <p>Process-based tensions:</p> <ul style="list-style-type: none"> ● full participation-continued progress <p>Outcome-based tensions:</p> <ul style="list-style-type: none"> ● impactful change-viable change ● necessary change-palatable change

privilege-disadvantage (i.e., in the form of political, social position, or status – though these are not always clear and are often dynamic) (Table 1).

More recently, Porter et al. (2018) analyze controversy associated with perceived errors in the Intergovernmental Panel on Climate Change’s (IPCC) Fourth Assessment Report. They identify four dialectical tensions divided into *diagnostic tensions* associated with how climate change is defined, and *prognostic tensions* related to understanding social responses to climate change (Table 1). Diagnostic tensions identified were *complexity-simplicity* (i.e., understanding the problem of climate change), and *certainty-uncertainty* (i.e., associated with attributing human impact to climate change). Furthermore, prognostic tensions identified were *legitimacy-illegitimacy* and *normativity-truth*, related to how the IPCC, and the climate change debate should be characterized, respectively.

Finally, Hoelscher (2019) proposes three dialectical tension types in inter-organizational change based on the actors’ commitment, their

ongoing participation in the process, and the project outcomes (Table 1). Firstly, “commitment-based tensions” consider the opposing poles of *collaborative-competitive*, and *scepticism-optimism* associated with the actor’s interactions in, and perceptions of a project. Secondly, “process-based tensions” relate to actor-perceived tensions between *full participation* and *continued progress*. The final tension-type is “outcome-based tensions”, which considers actors’ perceptions of *impactful* versus *viable change*, and *necessary* versus *palatable change*.

Consequently, these four dialectical studies offer key sources of dialectical tensions that are worth consideration, namely: the existing power relations, cultural context, how a ‘problem’ is defined and understood, and whether actors perceive the intervention as a necessary change and are therefore willing to participate. These themes inform the framework proposed at the culmination of section 2.2.

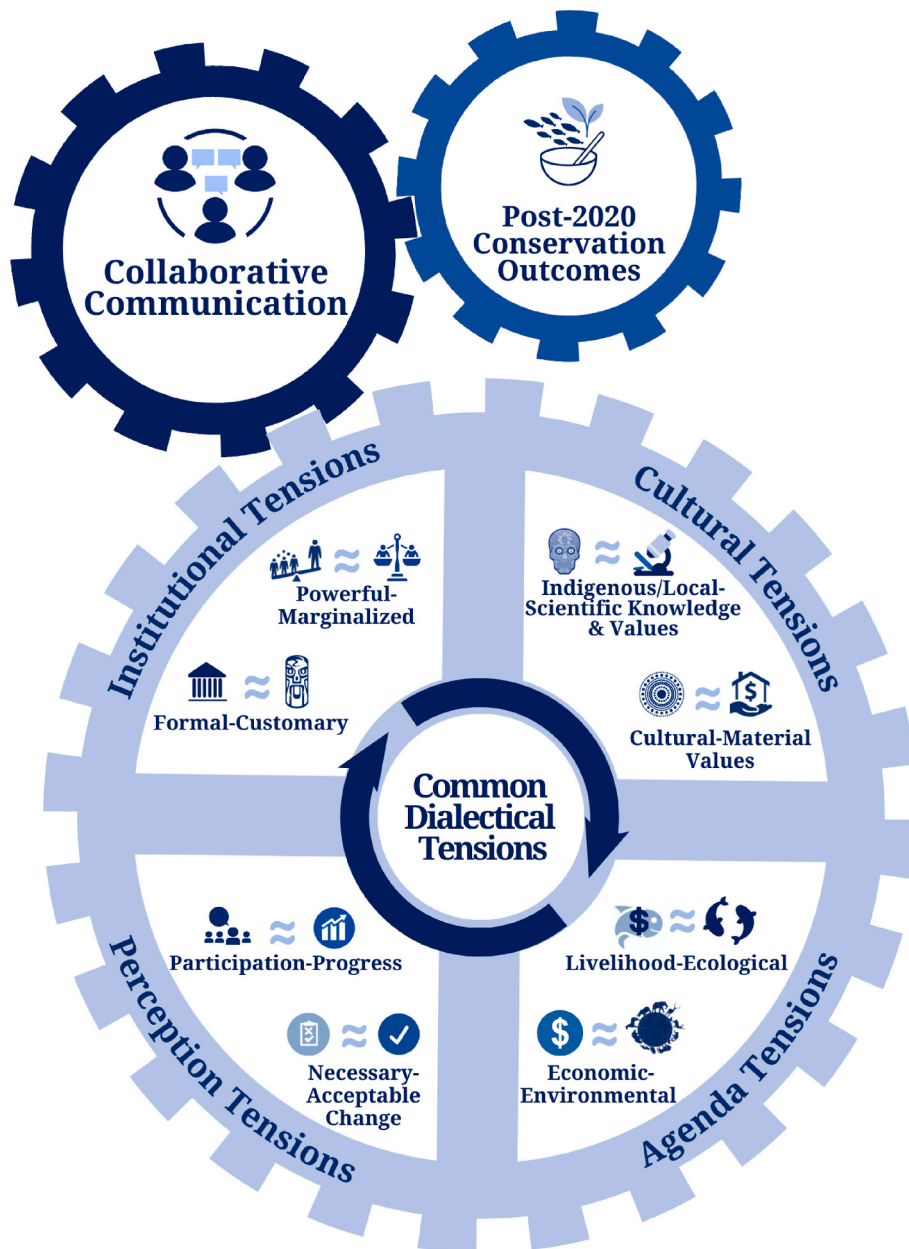


Fig. 1. A framework depicting common sources of dialectical tensions in collaborative conservation interventions that need to be managed to enable collaborative communication required to produce positive post-2020 ecological and social conservation outcomes.

2.2. A framework for enabling collaborative communication in post-2020 conservation

This section builds upon the theoretical foundations of [section 2.1](#). to propose a framework of common dialectical tensions, which if effectively managed can better enable collaborative communication required for positive post-2020 social *and* ecological outcomes ([Fig. 1](#)). This is by no means an exhaustive list, nor does it extensively critique each source of tension. However, the goal is to provide a starting point to stimulate further research into the topic, especially as it relates to conservation and environmental management contexts. Furthermore, due to the complexity of collaborative conservation, these dialectical tensions often overlap, and will also be context-specific. The proposed framework is applied to three selected case studies (introduced in [section 3.1.](#)), and revisited and amended in [section 4.2](#).

2.2.1. Institutional tensions

The concept of *power* is central to understanding dialectical tensions in conservation. While *power* can take on diverse representations, given the present topic this paper takes a “post-structuralist” conceptualization of power, which emphasizes the influence of discursive constructs found within interactions between diverse actors, and ideological and material elements ([Bennett et al., 2018](#)). Furthermore, dialectical tensions in conservation governance emerge from the *exclusion* of the ‘voices’ of certain actors/groups (i.e., *marginalization*). Consequently, the first tension of *powerful-marginalized* ([Fig. 1](#)) informs the discussions throughout.

2.2.1.1. Powerful-marginalized. The term *marginalization* is used as it relates to the lack of equity and legitimacy of institutional participation. Conservation is plagued by social inequality ([Bennett et al., 2021](#); [Dawson et al., 2021](#)), and the post-2020 GBF explicitly recognizes the urgent need to address this. Common sources of dialectical tensions include socio-economic and -cultural conflicts of interest, a lack of knowledge exchange, the inequitable sharing of decision-making power and costs and benefits, and ultimately, strained actor interactions within governance processes ([Barnes et al., 2019](#); [Thondhlana et al., 2020](#); [Bennett et al., 2021](#); [Rice et al., 2021](#)). Furthermore, extensive research shows that greater understanding and recognition is required of both the historic and current relations and conditions to address social inequality within conservation interventions (e.g., [Armitage et al., 2020](#); [Muhl and Sowman, 2020](#); [Rice et al., 2021](#)).

Conflict resolution strategies are central to addressing issues of ‘intersectional’ marginalization (i.e., based on gender, ethnicity, class, etc ...) by providing collaborative spaces for inclusive dialogue ([Armitage et al., 2020](#); [Fisher et al., 2020](#); [Bennett et al., 2021](#)). In particular, evidence shows that gender-inclusive interventions can yield better conservation outcomes (e.g., [Leisher et al., 2016](#)). However, recent research depicts how ‘gender-inclusive’ conservation attempts are often outdated and still prevent women’s effective empowerment or delivery of benefits ([Mangubhai and Lawless, 2021](#); [Lawless et al., 2021](#)). Accordingly, the post-2020 GBF explicitly calls for “Gender equality, women’s empowerment and gender-responsive approaches” in its implementation ([CBD, 2020](#): p11).

A further source of institutional tensions emerges from interactions between formal and informal institutions. Whilst research shows building upon existing local and customary institutional capacities in conservation governance can be beneficial (e.g., [Levine and Richmond, 2014](#); [Steenbergen and Warren, 2018](#)), a lack of informal institutional legitimacy, and ineffective communication between formal and informal institutions is a common source of dialectical tensions (e.g., [Atlas et al., 2021](#); [Rice et al., 2021](#)). Nevertheless, greater inclusion of the ‘voices’ of local and customary leaders may, but does not always, lead to elite-capture and inadequate representation of the broader local community, and therefore, greater intra-community conflict ([Warren](#)

[and Visser, 2016](#); [Steenbergen and Warren, 2018](#)).

2.2.2. Agenda tensions

Conflicts of interest are a common source of tension. Two key sources of ‘agenda’ tensions are, firstly, an intervention’s livelihood versus ecological objectives at a local scale, and secondly, national, regional, or global economic versus environmental objectives ([Fig. 1](#)).

2.2.2.1. Livelihood-ecological. Conservation is expected to deliver ecological *and* livelihood outcomes, and most notably, address poverty alleviation and food insecurity (e.g., [Roe et al., 2020](#); [Rice et al., 2021](#)). Therefore, a well-established source of dialectical tensions is a lack of alignment of an intervention’s ecological and livelihood objectives ([Gardner et al., 2020](#); [Rice et al., 2021](#)). This source of tension correlates strongly with the other tensions and is discussed further in [sections 2.2.3.2.](#) and [2.2.4.](#)

2.2.2.2. Economic-environmental. Despite conflicts between economic growth and environmental agendas, the former continues to be widely promoted ([Adams, 2020](#); [Otero et al., 2020](#)). Much literature discusses the struggle to reconcile these tensions, which arise from government and corporate agendas in the ‘capitalistic’ accumulation from ‘nature’, which conflict with those striving for its conservation (e.g., [Büscher and Fletcher, 2015](#); [Lunstrum, 2018](#)). Not surprisingly, *economic-environmental* agendas are a rich source of dialectical tensions amongst diverse actors located across scales, that must collaborate within contemporary conservation interventions. Accordingly, the post-2020 GBF calls for economic incentive reforms that are “either positive or neutral for biodiversity” ([CBD, 2020](#): p9).

2.2.3. Cultural tensions

Two important interconnected aspects of cultural tensions are, firstly, an interventions ability to effectively incorporate diverse sources of knowledge, and secondly, to reconcile diverse cultural values and worldviews within interventions (e.g., [Aswani et al., 2018](#); [Infield et al., 2018](#); [Alexander et al., 2019](#); [Atlas et al., 2021](#)). Therefore, two common sources of cultural tensions are *Indigenous/Local-Scientific knowledge and values*, and *Cultural-Material values* ([Fig. 1](#)).

2.2.3.1. Indigenous/local-scientific knowledge and values. The inability to ‘bridge’ the divide between local/indigenous knowledge and scientific knowledge remains common in many conservation contexts (e.g., [Aswani et al., 2018](#); [Alexander et al., 2019](#); [Atlas et al., 2021](#)). Furthermore, conservation often lacks understanding of, and does not always adequately incorporate the expression of cultural values and practices into conservation management, resulting in negative impacts on both social and ecological outcomes ([Infield et al., 2018](#); [Atlas et al., 2021](#); [Bennett et al., 2021](#)). Moreover, as introduced previously, historical relations between implementing partners and local communities expected to embrace conservation actions have implications for an intervention’s ability to produce positive outcomes ([Armitage et al., 2020](#); [Muhl and Sowman, 2020](#); [Atlas et al., 2021](#); [Rice et al., 2021](#)).

2.2.3.2. Cultural-Material values. Tensions may also arise over diverse perceptions of natural resources’ cultural and material value ([Muhl and Sowman, 2020](#); [Atlas et al., 2021](#)). High resource dependence and a lack of alternative non-extractive livelihoods may force a perceived material value of resources upon communities ([Muhl and Sowman, 2020](#); [Aldasoro-Said and Ortiz-Lozano, 2021](#)). Furthermore, while economic incentives are common in conservation, in certain contexts the culturally perceived value of resources and areas may be a more important determinant of conservation ‘success’ ([Jacobsen et al., 2021](#); [Thondhlana et al., 2020](#)).

2.2.4. Perception tensions

Perception tensions primarily emerge based on, firstly, whether perceived changes are deemed necessary and acceptable to those required to embrace them, and secondly, that continued participation is often linked to an intervention's ability to deliver perceived tangible progress (Armitage et al., 2020; Bennett et al., 2019, 2021 - Fig. 1).

2.2.4.1. Necessary-acceptable change. Perceived uncertainty or a lack of understanding associated with conservation-related data and the need for conservation actions, affects whether actors perceive interventions to be necessary, and therefore, influences the legitimacy of an intervention (Pollard et al., 2019). Furthermore, an intervention's perceived acceptability is highly dependent upon its alignment with the actor's socio-economic and cultural priorities, and the cost-benefits to those expected to embrace conservation actions (Thondhlana et al., 2020; Bennett et al., 2019, 2021; Rice et al., 2021). This is following the well-established literature on the need for social-ecological institutional fit for 'good governance' (see e.g., Epstein et al., 2015).

2.2.4.2. Participation-progress. Providing economic incentives, which outweigh the consequences of changed conservation behaviours, may motivate conservation action (Nilsson et al., 2016; Wright et al., 2016). Furthermore, research shows a lack of, conflict over, and the slow realization of benefits, both economic and cultural, results in frustration and decreased participation in conservation interventions (e.g., Armitage et al., 2020; Bennett et al., 2019, 2021; Rice et al., 2021). Consequently, interventions need to effectively communicate and showcase progress and encourage positively-perceived governance to promote collaborative communication (Gardner et al., 2020; Bennett et al., 2019; Rice et al., 2021).

3. Methods

3.1. Research approach

Qualitative approaches are increasingly recognized to provide a more nuanced and in-depth understanding of complex issues of climatic and environmental change, and their management (e.g., Sutherland et al., 2018; Moon et al., 2019; Bercht, 2021). Accordingly, this research employed an iterative and qualitative-interpretive approach (Cf. Elliott and Timulak, 2021), coupled with a case study approach, to gain an in-depth understanding of common sources of dialectical tensions within the three case studies. A case study approach is useful for capturing the complexities of interventions characterized by "nonlinear causality and unpredictable outcomes—as they unfold in unique, real-world situations" (Lavery et al., 2021: p5). Furthermore, case study research can improve: the contextual appropriateness of interventions; the understanding of 'how' interventions work, and 'how' and 'why' impacts vary across contexts; and can ensure findings are useful for decision-makers and researchers (Paparini et al., 2020: p303). A recent systematic review of case study approaches used in complex interventions identified four meta-narratives of relevance to this research, namely, case studies that: (1) develop and test complex interventions; (2) analyze change in organizations; (3) are appropriate for conducting realist evaluation; and (4) enable naturalistic study of complex change (see further Paparini et al., 2021: p232). This research was informed predominantly by meta-narratives (1) and (4).

Consequently, this research takes an iterative, theory-building approach that employs qualitative methods aimed at 'testing' the framework developed in Fig. 1 within the three case studies. In doing so it primarily strives to identify key contextual factors that emerge and are 'co-shaped' through social interactions, as it relates to sources of dialectical tension, and the ability to enable collaborative communication. Nevertheless, it is acknowledged that the findings emerging from such an approach can be very context-specific, and therefore, the ability to

generalize beyond the case study settings will require corroborating research within other contexts. The three case studies are introduced below.

3.2. Case studies

3.2.1. Case 1: The Bay of Ranobe, Madagascar

The Bay of Ranobe is a coastal lagoon located in southwest Madagascar, in East Africa, that is rich in marine biodiversity (Belle et al., 2009 - Fig. 2). The bay is home to approximately 8,000 fishers from 13 villages, which mainly identify as the *Vezo* people, for whom the sea is culturally important and a primary livelihood source (Barnes-Mauthe et al., 2013; Cripps and Gardner, 2016). Nevertheless, increased 'in-migration' of traditionally inland peoples is occurring (e.g., the *Masikoro* - better known as crop and livestock farmers) (Cripps and Gardner, 2016).

In April 2007, a local community-led association named FIMIHARA was formed to establish and manage a Locally-Managed Marine Area (LMMA) (Belle et al., 2009). FIMIHARA comprises fisher representatives from each village, Reef Doctor (i.e., a locally-based British NGO working in the bay since 2002), and other governmental, non-governmental and private sector partners (Belle et al., 2009). In 2007 and 2009, the *Massif des Roses* and *Ankaranjelita* LMMAs were established, respectively (Belle et al., 2009; Reef Doctor, 2012 - Fig. 2). Both LMMAs have since received full legal recognition. More recently, and after the completion of the present study, the *Vatsoa Marine Reserve* was declared in January 2019 (Reef Doctor, 2019).

3.2.2. Case 2: the Urok Islands, Guinea-Bissau

The Urok Islands are part of the Bijagós Archipelago located off the coast of Guinea-Bissau, in West Africa (Fig. 2). The archipelago has high levels of biodiversity and is especially recognized for large concentrations of migratory birds (Campredon and Catry, 2018). Furthermore, most of Guinea-Bissau's fishing activity takes place in the archipelago, which also accounts for a substantial portion of regional landings, however, Illegal, Unreported, and Unregulated fishing plaques the country (Okafor-Yarwood, 2019).

The Urok Islands are home to about 3,000 inhabitants, approximately 90% of which are the traditionally animist Bijagó people, for whom fish forms the primary protein source, and shellfish remains central to cultural ceremonies (Brenier et al., 2009).

In July 2005, the State legally recognized the Urok Islands Community-Managed Marine Protected Area (CMPA), the country's first and only to date (Tiniguena, 2021). The CMPA comprises the three islands of *Formosa*, *Nago*, and *Chediã*, and is also part of the Bolama and Bijagós Archipelago Biosphere Reserve (Fig. 2). The CMPA is managed by the Urok Management Committee (UMC), which includes fisher representatives from each village/island, local customary authorities, Tiniguena (i.e., a national NGO), the Institute for Biodiversity and Protected Areas (IBAP - i.e., the parastatal conservation agency), and additional state organizations (Brenier et al., 2009). In 2019, the CMPA was recognized as an Equator Initiative prize-winner (Equator Initiative, 2019).

3.2.3. Case 3: The Olifants Estuary, South Africa

The Olifants Estuary is one of only four permanently open estuaries on the west coast of South Africa (Turpie et al., 2002 - Fig. 2). It is also the country's largest supratidal and floodplain salt marsh, and is noted for its conservation importance (Turpie et al., 2002). The local community is estimated at 1200 households with approximately 120 households primarily dependent upon fishing for their livelihood (Sowman, 2017). The community is collectively referred to as *Ebenhaeser*, however, this name is also commonly used to describe the main area of the community including adjacent settlements of *Olifantsdrif* and *Nuwestatsie* (Fig. 2).

Due to concerns over bycatch by the State and fishery scientists

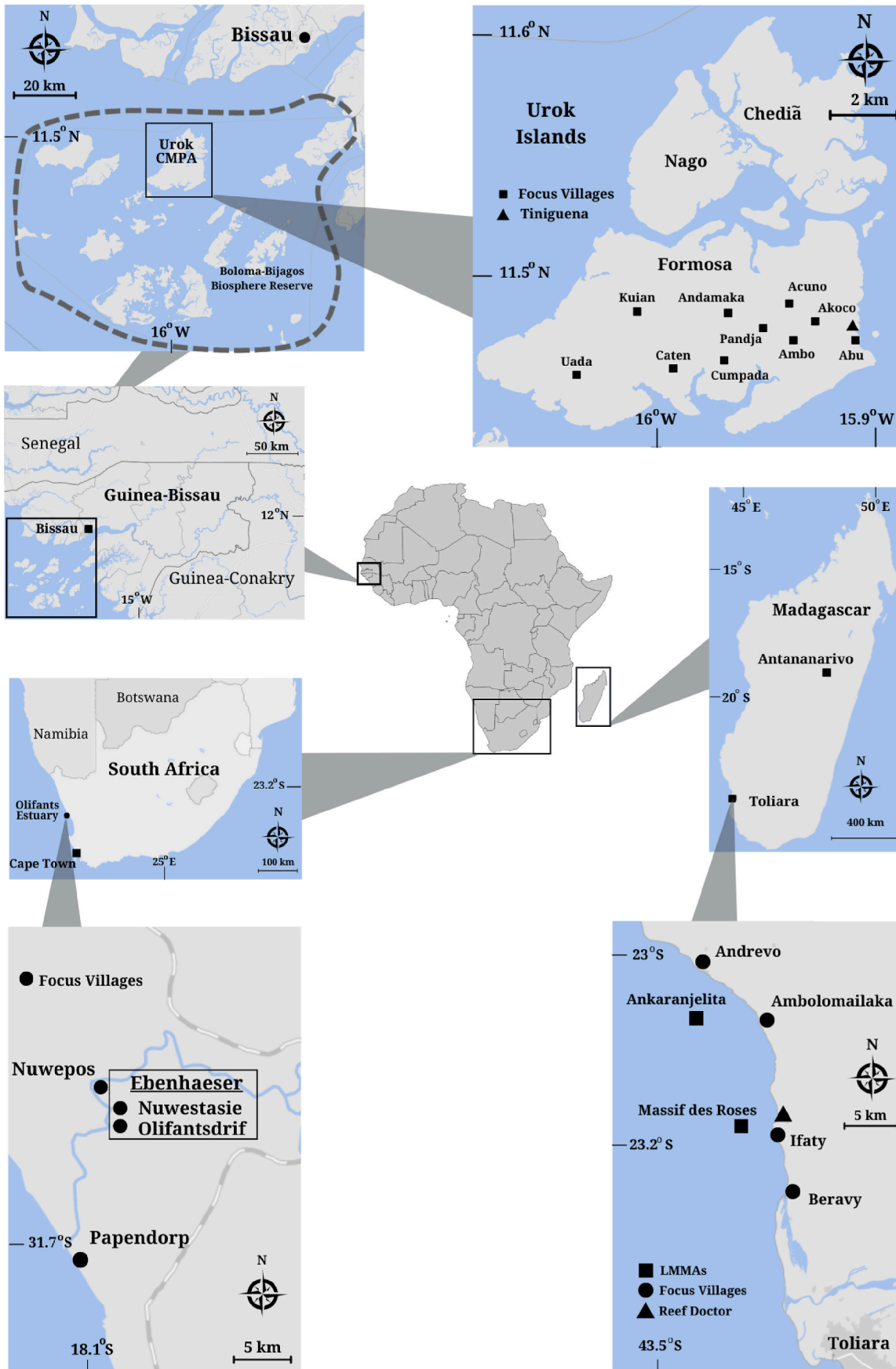


Fig. 2. A map depicting the three African coastal-marine case studies in the Urok Islands, Guinea-Bissau (top), Bay of Ranobe, Madagascar (bottom right), and Olifants Estuary, South Africa (bottom left). The focus villages for fieldwork, and the locations of other key actors mentioned in the paper, are also depicted in each case.

attempted to close the local fishery, however, agreements have since been reached for a no-take fishing zone within 1 km of the estuary mouth (Rice et al., 2017). Furthermore, a community conservation area (CCA) has been proposed at the estuarine mouth, which has received support from all actors, though implementation is incomplete. These agreements are largely the result of collaborative efforts of the multi-actor Olifants Estuary Management Forum (OEMF), which comprises state departments associated with environmental affairs and fisheries, local fishers represented by the Olifants Fishery Committee (OFC), and various ‘social’ partners (Sowman, 2017). These social partners include the Environmental Evaluation Unit (EEU) at the University of Cape Town (UCT), two NGOs in the form of Masifundise Development Trust (MDT) and the Legal Resource Centre (LRC), and additional civil society members.

3.3. Data collection

Fieldwork was carried out between 2016 and 2018 for approximately two months in each case study. The data collection and analysis process employed mixed-methods and triangulation, which has been shown to decrease the likelihood of drawing simplistic conclusions in environmental management contexts (e.g., Molina-Azorin et al., 2021). Methods used included semi-structured interviews, participant observation and ‘informal’ group discussions. Interviews formed the primary data collection method as they are widely recognized to offer a flexible and effective approach to obtain high quality data and greater understanding within conservation management (e.g., Sutherland et al., 2018; Young et al., 2018). Nevertheless, participant observation and ‘informal’ group discussions proved useful in supplementing and corroborating interview data. Furthermore, these two methods proved particularly important in capturing insights from minority and commonly marginalized groups, most notably women. These secondary methods also provided valuable opportunities to clarify findings, and provide feedback to a subset of respondents on emerging common sources of dialectical tensions in the three cases.

Face-to-face semi-structured interviews were conducted with 277 respondents in the three cases (Table 2). Sample sizes were not determined prior to data collection, but based upon reaching perceived theoretical saturation, which was deemed the most appropriate given the research topic and approach (Cf. Sim et al., 2018). Interviews included 69 key informant respondents from national and case-specific partner organizations (i.e., 25 – Bay of Ranobe; 14 – Urok Islands; 30 – Olifants Estuary), that included state departments, NGOs, the private sector and academic institutions (Table 2). Partner interviews lasted between 40 and 60 min. Furthermore, 208 interviews were conducted with community members (i.e., 82 – Bay of Ranobe; 80 – Urok Islands; 46 – Olifants Estuary), inclusive of customary authorities (e.g., village chiefs/presidents and council members), and representatives of local community-based organizations (CBOs –inclusive of the local conservation associations) (Table 2; Fig. 2). Community respondents were identified at random within focus villages, the exception being purposively selected local leaders (e.g., customary authorities and CBO representatives). Focus villages were selected, and were considered representative of the population, based upon the advice of local partner organizations in each case (Table 2; Fig. 2). Community interviews were between 30 and 40 min in duration. Whilst acknowledging potential sampling and interviewer bias, it is believed that the research approach, and the pursuit of theoretical saturation, sufficiently mitigated against this.

Interviews employed a “conversational technique”, with questions explained and/or rephrased to promote conversational flexibility for

Table 2

Respondent composition, and respondent and focus village codes used.

Case Study	Respondent Composition	Respondent Codes
Bay of Ranobe (RA) LMMAs, Madagascar	Community respondents (N = 82): Male (56%); Female (44%); Elder (21%); FIMIHARA representatives (9%); VP (4%) Partner organization respondents (N = 25): NGO (65%); State (29%); Academic (6%)	MD – Madagascar PO – Partner Organization Focus Village Codes: IF – Ifaty BR – Beravy AM – Ambolmailaka AD – Andrevo GB – Guinea-Bissau PO – Partner Organization Focus Village Codes: AB – Abu KA – Kabinhate AM – Ambo AK – Akoco AC – Acuno PA – Pandja AN – Andamaka CU – Cumpada UA – Uada KU – Kuian CA – Caten
The Urok Islands (UI) CMPA, Guinea-Bissau	Community respondents (N = 80): Male (64%); Female (36%); Elder (24%); Customary Authorities (14%); UMC representatives (9%) Partner Organization respondents (N = 14): NGO (71%); State (29%)	SA – South Africa PO – Partner Organization Focus Village Codes: NP – Nuwepos NS – Nuwestasie OD – Olifantsdrif PA – Papendorp
The Olifants Estuary (OE) proposed CCA, South Africa	Community respondents (N = 46): Male (82%); Female (18%); Elder (55%); OFC representatives (9%) Partner Organization respondents (N = 30): State and parastatal agencies (43%); NGO (27%); Academic (20%); Civil Society (10%)	

increased respondent understanding and response accuracy (Conrad and Schober, 2020). Furthermore, interviews in Madagascar and Guinea-Bissau made use of local translators. All translators were university graduates fluent in diverse local dialects. Whilst acknowledging the potential limitations, the knowledge of translators proved invaluable due to a lack of prior knowledge, particularly, related to subtleties in language and cultural customs, and was observed to facilitate the interview process. The interview questions were revised prior to fieldwork in each case based on a pilot study conducted in 2015 with 20 South African respondents involved in conservation management. Data captured during these pilot interviews was retained to inform the Olifants case study in South Africa. All interviews were transcribed to identify common themes and corroborated with other fieldwork notes.

Participant observation included accompanying community members on multiple natural resource harvesting outings, and attending several local CBO, village and multi-stakeholder meetings in each case study. Informal group discussions involved ‘open-ended’ discussions ‘guided’ by modified versions of the *Most Significant Change* (i.e., a story-based approach; Davies and Dart, 2005), and *Strength, Weakness, Opportunities, Threats* approaches (Vonk et al., 2007). Detailed notes were taken during both participant observation and informal group discussions.

Ethical clearance was obtained from the author’s institution prior to any data collection, and informed consent from each respondent. The anonymity of respondents was maintained by recording responses based on identifiers, and a unique number associated with the case study and

the respondent group (Table 2). For example, the second community member interviewed from the village of *Ifaty* (IF) in the *Bay of Ranobe* (RA), in Madagascar, was recorded as RAIF02. Furthermore, *partner organization* (PO) respondents were recorded based upon the country, for example, the third South African partner respondent interviewed was recorded as SAPO3 (Table 2).

4. Findings

The framework proposed previously in Fig. 1 guided the discussion of the three selected cases. The framework is revised based upon the case study findings (section 4.2.). The findings section culminates with proposed recommendations to better enable collaborative communication for positive post-2020 conservation outcomes (section 4.3.).

4.1. Case study findings

4.1.1. Institutional tensions

4.1.1.1. Powerful-marginalized. Not surprisingly, marginalization was central to dialectical tensions in all three cases. In particular, those emerging from intra-community tensions, strained relations between community representatives and partners, and between State and non-State partners. Intra-community relations notably included *inter-village* (i.e., between different villages making up a ‘community’), and *community-representatives* (i.e., between representatives of community-based organizations (CBOs) and their constituents). Local representatives included village presidents and councils, and local conservation-related associations (e.g., *FIMIHARA* in the Bay of Ranobe). In addition, *representative-partner* relations are those between these aforementioned local representatives and partners, the latter inclusive of State and ‘non-State’ partners. The importance of representative-partner relationships was evident since community members indicated that their representatives were their only link to partners and project knowledge. Lastly, State and non-State partner relations refer to those between the respective State departments and other ‘non-State’ partners (e.g., between *IBAP* and *Tiniguena* in the Urok Islands).

Community responses frequently perceived village-based exclusion as a source of tension. More specifically, inter-village marginalization emerged in all three cases as a dominant village was perceived to have ‘captured’ governance processes. For example, the villages of *Ifaty* in the Bay of Ranobe, *Abu* in the Urok Islands, and *Ebenhaeser* in the Olifants Estuary. Responses indicated that perceived exclusion emerged from the involvement of these ‘dominant’ villages in their respective conservation interventions from the outset, and conversely limited involvement of other villages located further away from each intervention’s ‘project hub’ (i.e., the location of the perceived dominant village and supporting partner). For example, the northern villages of *Andrevo* and *Ambolomailaka* in the Bay of Ranobe, and the villages located further west from *Abu*, as well as the other two islands of *Nago* and *Chediā* in the Urok Islands. For example, some Urok Island respondents from *Caten*, *Andamaka*, and *Uada* stated respectively, “we go to work, but everything goes to Abu, we receive nothing!” (UICA5); “Abu have a lot and we don’t!” (UIAN4); and “they never bring anything for us” (UIUA2). Furthermore, a perceived ‘division’ emerged between fishers from *Ebenhaeser* and *Papendorp* in the Olifants Estuary, and like the other two cases was attributed to perceived inequitable representation on the OFC. Moreover, an additional intra-community source of tension emerged between CBO representatives and other community members, even with the ‘dominant’ villages. This led to suggestions for representatives to rotate more frequently in all three cases.

In addition to inter-village tensions, responses also emphasize the need to manage potential tensions between local representatives on ‘conservation associations’ (e.g., *FIMIHARA*) and customary institutions. Accordingly, respondents noted that if representation is

‘culturally-misaligned’ this can cause tensions between those elected, and established customary leaders. For example, South African partners emphasized the potential for tensions between those elected to *Communal Property Associations* (i.e., responsible for representing local community interests in the land claims process), and established local leaders (e.g., fisher association leaders on the OFC), as community respondents confirmed in the Olifants Estuary. Furthermore, these customary leaders may be more effective since they often, though not always, possess greater levels of respect in their communities. This was the case for many respondents in the Urok Islands, and especially those residing in villages further from Abu. For example, as one Cumpada respondent stated about customary leaders relations, “we respect them like our own father” (UICU4). Nevertheless, as some South African partners noted, whilst customary authorities may be, “open to communication [they] have the potential to ‘mutiny’” (SAPO7). Consequently, both partners and community respondents in all three cases frequently emphasized the importance of culturally aligning interventions with customary authorities.

A further source of tensions was perceived gender exclusion. For example, in the Bay of Ranobe female community respondents frequently stated that they did not even know the role of *FIMIHARA* as “only men go to the [*FIMIHARA*] meeting” (RAIF12). A lack of gender-inclusive conservation decision-making has been revealed previously in the area (e.g., *Westerman and Benbow, 2013*). Furthermore, while customary *Bijagó* society is matriarchal, there is a lack of female representation in the UMC.

An additional source of local scale tensions concerning power and marginalization emerged in the three case studies with regards to how leaders are elected. Respondents noted that ‘how’ and ‘who’ the elected leaders were potentially influences how they exercise their decision-making power, the possibility of elite capture, and ultimately the ability to gain support for interventions within the broader community. The need for democratically elected and rotated representation. More specifically, tensions emerged between *democratically-meritocratically* elected local representatives. This emerged particularly strongly among the Bay of Ranobe respondents. Therefore, while partners, in particular, acknowledged the need for leadership capacity, all respondents confirmed the importance of rotating elected leaders whilst transferring capacity to those newly elected so as not to create a ‘leadership vacuum’.

4.1.1.2. Formal-informal. A lack of perceived legitimacy of informal institutions was frequently identified as a source of dialectical tension amongst respondents. For example, in South Africa, approximately 60% of all, and 77% of non-State, partners noted a perceived reluctance of the State to devolve secure rights and powers to community-based organizations. Accordingly, South African partners noted, “enabling legislation [for conservation] is not building on the cultural and customary foundation [found in communities]” (SAPO11), and emphasized that conservation in the country needed to better, “unlock the opportunities different institutions bring to the table” (SAPO27). Furthermore, Olifants Estuary community members frequently stated that the CCA needs to be declared to provide the required legitimacy to prevent environmental degradation, notably, from mining and local recreational activities. Similarly, while legislation enables community-NGO partnered collaborative conservation in Madagascar, non-State partners frequently noted continued State ‘meddling’ in these interventions. As one non-State partner noted, “Marine natural resources represent wealth, so [the State] don’t want to let go”, and consequently the “State still has the final say over the community’s voice” (MDPO4). This meddling continues even though many respondents, and prior studies, have recognized that collaborative interventions empowering informal institutions can increase accountability and transparency in comparison to a State characterized by corruption and fragility (*Gore et al., 2013; Gardner et al., 2020*).

4.1.2. Agenda tensions

4.1.2.1. Livelihood-ecological. Not surprisingly, *livelihood-ecological* tensions emerged strongly since in all three cases local communities are heavily reliant upon natural resources. While all respondents acknowledged conservation action was important, a lack of alternative livelihoods determined their resource harvesting patterns. As Olifants Estuary partner respondents noted, “fishers realized the need to protect the environment since the late 80’s” (SAPO9), but the community is forced to, “think of today and not tomorrow” (SAPO6). Furthermore, other South African partners acknowledged that it was “difficult to sell the conservation agenda due to past experiences” (SAPO16), and emphasized that conservation partners “haven’t been able to see the extent of apartheid undermining epistemological approaches [to conservation]” (SAPO11). This once again reinforces the need to be aware of the influence of past relations and conservation approaches on support for interventions.

Similarly, in the Bay of Ranobe, all community respondents stated that they eat and/or sell marine resources, with boat-building an additional associated livelihood source. Nevertheless, all these respondents confirmed that harvesting activity was dictated by high poverty levels, but that marine resources were not meeting their basic needs. Likewise, in the Urok Islands, all respondents confirmed their high levels of dependence, especially upon local forests. As one community respondent stated, “when the wood ends, we take a seat, then we starve” (UIAM7). Consequently, while positive conservation mindsets were common, survival dictates this tension, and without urgent attention will continue to determine potentially unsustainable harvesting practices. As a South African partner respondent suggested, there is a need to figure out “how we can unlock socio-economic opportunities while pursuing conservation” (SAPO27).

4.1.2.2. Economic-environmental. Whilst mining is an important contributor to the country’s economy, it is a frequently identified national environmental threat, and emerged as a common source of *economic-environmental* agenda-based tensions within both partners and community responses in the Olifants Estuary. These respondents frequently emphasized negative ecological effects of mining such as sediment build-up from marine diamond dredging in the area, and subsequently, decreased water quality and local fish stocks in the estuary mouth. As a partner respondent stated there are “issues with mining and getting the Department of Mineral Resources to hold companies accountable” (SAPO4). Furthermore, a community respondent stated, “mining is a priority of the State, not the people!” (OEOD21). Consequently, some partners stated there is a specific “need to avoid private capture [by corporations] in national conservation” (SAPO16). Similarly, the well-established and lucrative cashew market in Guinea-Bissau, and as observed in the Urok Islands, continues to perpetuate deforestation (Temudo and Abrantes, 2014). Also, ongoing demand stimulates persistently high illegal and unregulated fishing levels in the Bijagós archipelago (Okafor-Yarwood, 2019). Likewise, concerns were raised amongst respondents in the Bay of Ranobe over the negative effects of Chinese commercial fishing in the vicinity on local fish.

4.1.2.3. Project-funder objectives. Funding, and relations between funders and practitioners, emerged as an additional source of tension in all three cases. More specifically, the majority of respondents noted a lack of State funding for conservation, and the subsequent lack of State support (i.e., notably in monitoring and enforcement), means external funding is necessary. However, all partners emphasized that the short-term nature of funding and expectations to deliver tangible outcomes, caused agenda-based tensions between them and funders, with subsequent implications for community support of interventions (discussed further in [section 4.1.4.3.](#) below). This notably emerged in Madagascar and South Africa. For example, in the case of the former, while global

conservation prioritization in Madagascar has promoted international donor funding that enables conservation efforts, including NGO-partnered collaborative interventions, partners emphasized donor objectives and often misaligned with local priorities and realities. Therefore, respondents emphasized misaligned funding objectives as a source of potential tensions that requires urgent attention to enable required collaboration.

4.1.3. Cultural tensions

4.1.3.1. Local-scientific knowledge and values. The tension between local and scientific knowledge was confirmed in all three case studies and perhaps emphasized most strongly by some South African partners who identified the constraints of the ‘power of science’. For example, these respondents often expressed concern that “science has never been about communities!” (SAPO4) and emphasized that conservation in South Africa, “was treated originally as a science question, but it is a societal question” (SAPO10). That said, in all three cases at least partial customary erosion was acknowledged, but respondents emphasized that customary institutions and practices remained influential. Accordingly, South African partners emphasized that while “culture is important for conservation to succeed!” (SAPO14), there is a “need to nurture community pride in the environment” (SAPO10), and, “emphasize the cultural history of conservation”, and to, “create linkages to living landscapes and cultural heritage” (SAPO9).

The use of customary practices such as *Fady* (i.e., taboos), and *Dina* (i.e., socio-cultural norms) in natural resource management is recognized by conservation partners and communities in Madagascar and has often been shown successful (see e.g., Gardner et al., 2020). Furthermore, in the Urok Islands protection of sacred areas and the use of *malto malgos* (i.e., ‘curses’) continues to promote and encourage community participation and motivation in conserving natural resources. For example, one community respondent emphatically stated concerning forest resources that, “if [the curse] says don’t touch and you touch, you will die!” (UIAM3). Moreover, as one Urok elder emphasized, “we have enough to preserve our natural resources, we have the moral power to do it” (UIAB2). Consequently, respondents called for more effective incorporation of both customary and scientific knowledge and values, which was perhaps best described by a community respondent from the Urok Islands who stated, “we need to change the mindset, we need to mix what’s useful from traditions with the modern” (UIAM9).

4.1.3.2. Cultural-Material values. As stated above the majority of respondents acknowledged partial cultural erosion of customary institutions and practices associated with natural resource access and use, and was frequently attributed to high levels of poverty and a lack of alternative livelihoods. For example, as a South African partner emphasized, while many still, “believe in customary rules [they] are forced to break them as they can’t afford to survive” (SAPO11). Furthermore, local fishers in the Olifants Estuary stated, “Life is from the river!” (OEOD1), and, “there is only fish, it’s our source of income, if we don’t have it we starve” (OEOD10). Similarly, while cultural practices like hunting for ‘bush-meat’ and sacred spaces exist in many areas of Guinea-Bissau, these have frequently been shown insufficient to alleviate pressure on natural resources (Temudo, 2012; Cross, 2016). Furthermore, Urok Island respondents consistently described the irony of how harvesting palm-based products and cashew has become a common method of trade for rice (i.e., a former traditional staple crop). Consequently, findings from this category of tensions strongly correlate with those discussed under livelihood-ecological tensions previously in [section 4.1.2.1.](#)

4.1.3.3. Culture-based exclusion. Culture-based exclusion within communities emerged as an additional source of tensions. More specifically, this pertained to the perceived marginalization of less dominant cultural

groups within communities. This notably emerged in the Bay of Ranobe between the predominately *Vezo* population (i.e., traditionally a ‘fisher people’), and the *Masikoro* (i.e., traditionally farmers). In particular, many *Vezo* respondents emphasized that the *Masikoro* that have migrated to the coasts lack necessary local ecological knowledge, and often make use of destructive fishing methods. In contrast, *Masikoro* respondents frequently perceived their exclusion through a lack of representation on CBOs. Whilst *Vezo* ‘identity’ is ‘fluid’ and is considered a ‘learned lifestyle’, responses reveal that perceptions of ‘pure *Vezo*’ can cause intra-community conflict, as others have noted (e.g., Gripps & Gardner, 2016). Similarly, the issue surfaced in the Urok Islands as it pertains to the predominantly *Bijagó* population, and the increasing immigration of fishers from other neighbouring West African nations (see Cross, 2016). This was considered of particular concern given the well-documented high levels of illegal and unregulated fishing that plagues the archipelago (Okafor-Yarwood, 2019).

4.1.4. Perception tensions

4.1.4.1. Necessary-acceptable change. Findings reinforced that the acceptability of proposed conservation ‘changes’ is largely determined by an intervention’s local socio-economic and cultural alignment. Accordingly, in all three cases, community members emphasized a desire for alternative and socially acceptable livelihoods if they were to embrace changes. In the Bay of Ranobe, and elsewhere in Madagascar, as discussed throughout, conservation efforts especially aim to align with cultural priorities. Furthermore, the implementation of several aquaculture projects in the area was positively perceived by the community. Moreover, community members in the Bay of Ranobe emphasized the importance of LMMAs being declared through cultural ceremonies conducted by elders that formalized the *Dina*. Nevertheless, these respondents also confirmed that persistent poverty means many fishers still did fish with the no-take LMMAs and desired and supported the implementation of seasonal closures instead.

In the Urok Islands, the CMPA was purposively established using a three-tier zonal system that allows a zone for subsistence and ceremonial fishing solely by residents. However, responses confirmed a perceived influx of ‘outsiders’ fishing in restricted zones, and a lack of State monitoring and enforcement, which has affected conservation outcomes. Respondents also emphasized that community priorities change over time, and therefore, interventions need to constantly consult community members to manage this dialectical tension. Consequently, the acceptability of change correlates strongly with the agenda, and cultural tensions discussed previously.

4.1.4.2. Participation-progress. A lack of perceived progress emerged in all three cases. As community members in the Olifants Estuary stated, “the challenge is keeping interest, we need to see progress to maintain interest” (OENS4), and “we need outcomes to motivate participation and action” (OEPA2). Respondents largely attributed the lack of progress declaring the CCA to a lack of political will and State support. Furthermore, while the other two interventions have been functioning for more than a decade, many of the respondents in the three cases emphasized a perceived lack of tangible benefits or changes to their quality of life. This led one Bay of Ranobe respondent to state that the “LMMAs are just decorations in the sea” (RAAD7). Likewise, in the Urok Islands community respondents stated that “The CMPA needs to improve, it is too slow to show benefits” (UIAB7). A key consideration is the need to effectively communicate progress to community members. A lack of perceived information-sharing emerged in all three cases and followed the aforementioned village-based marginalization pattern. Consequently, effective communication is key to conveying not only expectations but also progress if it is to enable required ongoing participation and collaboration.

4.1.4.3. Past-present. An additional source of perception tension in all cases was the effect of past marginalization on present relations, with responses confirming its effect on collaboration required for an intervention’s ‘success’. This firstly pertained to the aforementioned village-based exclusion, and secondly, past-present relational tensions stemming from past colonial legacies, and more recent experiences with exclusionary conservation interventions. This emerged in all three cases, however, was particularly strongly emphasized by respondents in South Africa where negative perceptions of persistent exclusionary conservation approaches that originate with both the previous colonial, and especially, apartheid regimes (see Rice et al., 2021). Finally, in all three cases, both partner and community respondents emphasized the negative impact of the perceived failure of past projects on current conservation efforts for enabling collaborative communication and participation.

4.2. A revised framework

As stated in section 2.1., it should be acknowledged that dialectical systems are complex, overlapping, and difficult to study reliably in isolation. Nevertheless, the above findings reflect several common sources of dialectical tensions found within the literature. Accordingly, the case studies confirmed the overarching sources of dialectical tensions that were drawn from the literature, firstly, those emerging from the four dialectical perspectives presented previously in Table 1, and secondly, the framework proposed in Fig. 1 that evolved from these perspectives and the conservation literature. More specifically, key sources of tensions that were commonly identified arose in each case from power relations and marginalization/exclusion (i.e., *institutional tensions*), perceived misaligned/exclusionary cultural context (i.e., *cultural tensions*), how a ‘problem’ is defined, understood and actions/priorities are identified (i.e., *agenda tensions*), and whether actors perceive the intervention as necessary and able to deliver tangible progress (i.e., *perception tensions*).

Therefore, based upon the case study findings the literature-based framework proposed previously in Fig. 1, is revised in Fig. 3 below. The revised framework notably strives to expand the scope of potential sources of tension, especially within the context of collaborative conservation interventions. This is perhaps most notable regarding the ‘institutional tensions’ (Fig. 3). Accordingly, building upon the findings the tension of *powerful-marginalized* may be better represented by specifying both cross-scale and local-scale institutional tensions (Fig. 3). In particular, the dialectical tensions associated with the election of local representatives, intra-community tensions emerging from diverse community institutions, and locally perceived inter-village exclusion from governance processes (Fig. 3). Furthermore, the case studies reinforced the need to better manage the legitimacy of both informal institutions, and persistent institutional gender-based exclusion (Fig. 3).

The revised framework also emphasizes the need to better manage local-scale tensions related to perceived culture-based exclusion within culturally diverse communities (i.e., the reality of most interventions). Furthermore, agenda tensions associated with environmental and economic priorities, and in particular, the potential misaligned nature of contemporary funding strategies, also require consideration. In addition, perceived past and present relations emerged as a noteworthy source of tension requiring attention.

As communication is a relational issue it is central to promoting required collaboration. Therefore, the aforementioned sources of dialectical tensions necessitate increased levels of inclusive engagement and deliberation from the outset (i.e., during the intervention’s planning and implementation phases), as well as within ongoing governance processes and activities, if required collaborative communication is to improve.

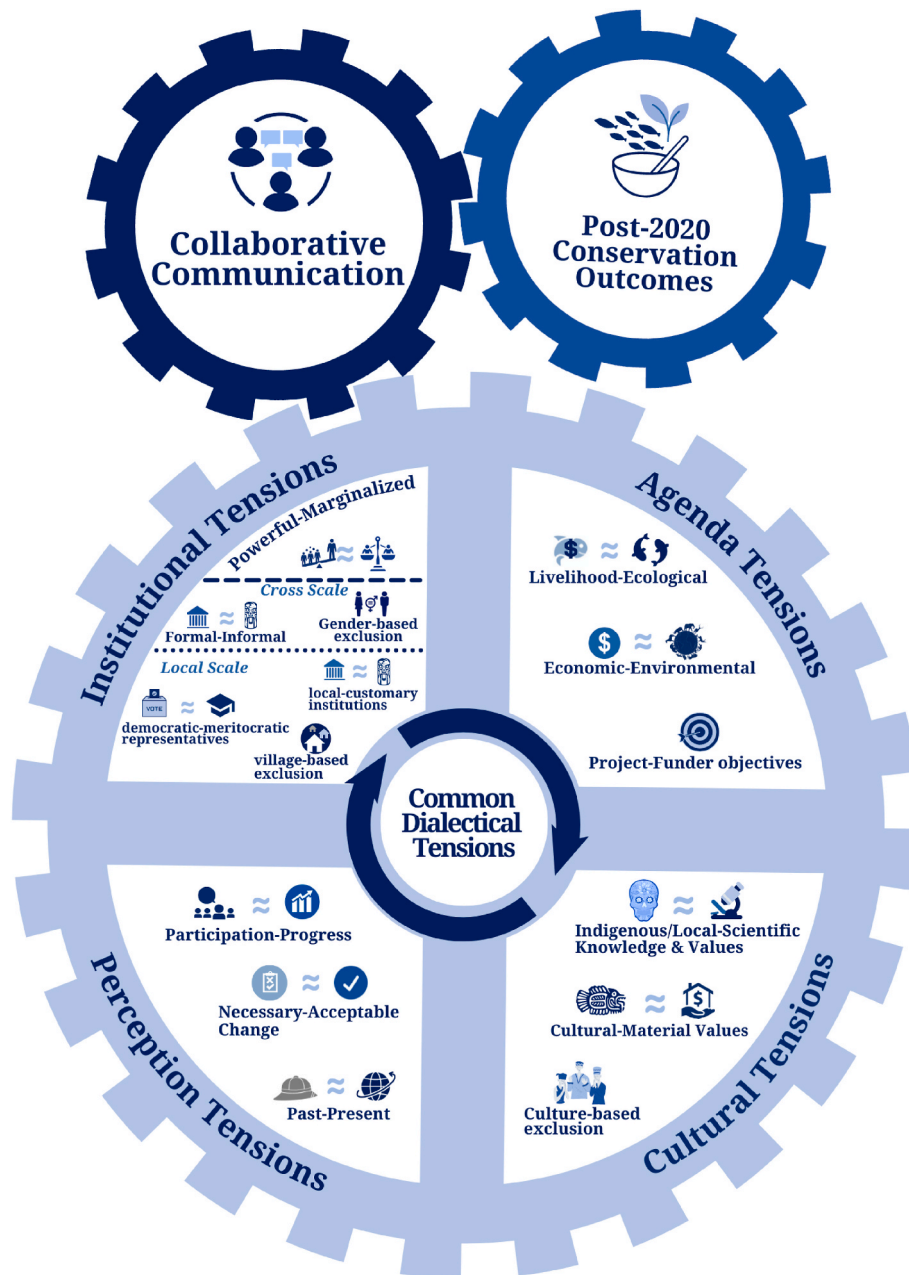


Fig. 3. A revised framework to enable collaborative communication required for positive post-2020 ecological and social conservation outcomes. The framework builds upon the literature-based framework proposed previously in Fig. 1 by emphasizing additional sources of dialectical tensions that emerged from the three case studies.

4.3. Recommendations for enabling post-2020 collaborative communication

If future conservation interventions are to achieve required collaboration, and specifically, effective participation of IPLCs as called for by the post-2020 GBF, improving multi-stakeholder communication is crucial. However, there is no one-size-fits-all, ‘perfect’ recipe for success. Accordingly, the sources of dialectical tensions, and how to enable required collaborative communication, will be context-specific. Nevertheless, a key facet of enabling collaborative communication is managing, as opposed to eliminating, the inevitable dialectical tensions found within collaborative conservation. This requires building communicative capacity among the multiple and diverse actors associated with an intervention, and subsequently, the ‘co-creation’ of context-specific communicative strategies.

As can be learned from other dialectical studies, positively managing dialectical tensions in collaborative conservation interventions requires collective recognition for the tension, and subsequently, collaboratively working towards a shared framing of the tension in an attempt to mitigate the negative impact it may be having on the intervention’s ‘success’ (Porter et al., 2018; Hoelscher, 2019). Furthermore, enabling collaborative communication requires identifying and clearly articulating roles for all actors within this process, as well as ‘co-creating’ pathways of change to better incorporate complexity, and reconcile all actor’s values and inputs, to achieve *positive* and *realistic*, rather than *idealistic* outcomes (Cox, 2015; Rice et al., 2020). As Peterson et al. (2004: p758) emphasize within the context of collaborative conservation, effective communication requires a social environment that enables:

“participants to fully explain their perspectives to those with opposing views, as well as to actively listen to opposing viewpoints to understand those perspectives. Participants need not like each other, but they must respect each other as adversaries worth arguing against.”

Therefore, at its core, collaborative communication requires building trust and respect amongst diverse actors (Peterson et al., 2004; Rice et al., 2021). However, this is a common constraint within conventional collaborative conservation interventions, and is perhaps most notably a result of a persistent perpetuation of centralized and exclusionary conservation approaches and associated past relational experiences, and an enduring lack of recognition for, and confidence in, the abilities of local and indigenous communities to manage natural resources (Armitage et al., 2020; Bennett et al., 2021; Rice et al., 2021). That said, in reality, collaborative conservation, and specifically the implementation of the post-2020 GBF, often requires facilitation by a particular ‘party’, commonly a government or parastatal conservation agency or NGO. Therefore, future conservation efforts necessitate strong and ethical bridging organizations and actors that can facilitate engagement and dialogue characterized by inclusivity, transparency, accountability, and ultimately, social equity (Berdej et al., 2019; Bennett et al., 2021). Accordingly, collaborative conservation interventions may benefit from research into both leadership and linguistic politeness, particularly, as it pertains to actors able to communicate and facilitate governance processes amongst diverse actors (e.g., Rice and Nguyen, 2015; Northouse, 2016).

Consequently, these bridging actors require the basic communicative skills to enable collaborative communication, particularly, the skills necessary to resolving conflicts. As a matter of fact, post-2020 conservation will benefit from *all* actors receiving initial basic training in essential communication skills before commencing an intervention if it wants to increase its chances of achieving increased social equity, and in particular, inclusive participation of *all* actors, and their knowledge and priorities.

Consequently, by promoting collaborative communication conservation may be more successful at delivering both ecological *and* social outcomes. More specific to the present focus, this may better ‘answer’ the post-2020 GBF’s call for “collaboration and whole-of-society engagement” (CBD, 2020: p3), and particularly, the realization of “the full and effective participation of indigenous peoples and local communities” (CBD, 2020: p7), that the CBD have deemed crucial to facilitating interventions able to achieve the post-2020 GBF’s objective to reduce biodiversity loss *and* sustainably meet the needs of people. Lastly, many scholars and practitioners operating within diverse multi-stakeholder environmental management contexts would probably find these strategies equally valuable.

5. Contributions to conservation and environmental management

Collaborative communication within diverse conservation and environmental management contexts, and collaborative governance for that matter, represents a ‘human-based’ challenge, and opportunity. It requires greater recognition and incorporation of multiple and diverse actors and interests, and navigating the inevitable tensions between them. Consequently, conservation and environmental management interventions will benefit from expanding the role and recognizing the importance of communication as a central strategy to improve required collaboration amongst a more inclusive array of actors to increase our chances of reaching desired social and ecological outcomes. Therefore, a deeper understanding of how to better facilitate inclusive and collaborative communication within these types of interventions, characterized by multi-stakeholder governance processes, has the potential to contribute to more effective and socially-just governance that is required for greater ecological *and* social ‘success’. However, rather than solve

common collaborative environmental governance problems, insights offered aim to contribute toward greater awareness of the importance of communication, potential sources of dialectical tensions, and ‘co-creating’ and deliberating context-specific communicative strategies among all governance actors to manage them. Accordingly, the discussion strives to make a small contribution to attempts to improve environmental governance processes, and strongly encourages others to build on the topic within their own contexts.

In addition to the primary contribution to emphasize the importance of communication for required collaboration, a secondary contribution is toward the ‘knowledge-base’ associated with conservation social sciences, and by extension environmental social sciences, particularly within the African context where published findings are comparatively scarce. Furthermore, the discussion seeks to showcase the usefulness of social science research, and qualitative approaches and methods to obtaining a more nuanced and in-depth understanding of ‘human-based’ environmental issues, and their management. After all, environmental governance is about people and how they think, talk, and act within their environments. Accordingly, the paper echoes increasing calls for the greater understanding of the human dimension of conservation (e.g., Bennett et al., 2017). Consequently, while not advocating for the use of the social over natural sciences, nor qualitative approaches over quantitative approaches, this paper aligns with others in emphasizing that the social sciences have much to offer conservation and environmental management, which will benefit from incorporating diverse approaches and a plurality of methods if it is to better address contemporary issues such as poverty, climate change and biodiversity loss (e.g., Bennett et al., 2017; Rust et al., 2017; Sutherland et al., 2018; Moon et al., 2019).

6. Conclusion

To conclude, communication is central to collaboration, and collaboration is central to improved conservation and environmental management. The findings of the paper emphasize the importance of identifying, recognizing and positively managing dialectical tensions to enable more effective and inclusive collaborative communication, and therefore, collaborative governance able to promote greater social and ecological ‘success’. Consequently, the discussion should interest diverse actors, including scholars and practitioners operating in other multi-stakeholder environmental management contexts.

Credit author statement

Wayne Stanley Rice: Conceptualization, Methodology, Investigation, Formal analysis, Visualization, Writing – original draft, Writing – review & editing.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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