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Authors: Emily Woodhouse[1], Claire Bedelian[2], Paul Barnes[3], Gisella S Cruz-Garcia[4], Neil Dawson[5], Nicole Gross-Camp[6], Katherine Homewood[7], Julia PG Jones[8], Adrian Martin[9], Elisa Morgera[10], Kate Schreckenberg[11]
Affiliations: Department of Anthropology, University College London, London, UK[1], International Institute for Environment and Development, London, UK[2], EDGE of Existence Programme, Zoological Society London, London, UK[3], Sowing Diversity = Harvesting Security, Oxfam Novib, The Hague, The Netherlands[4], School of International Development, University of East Anglia, Norwich, UK[5], Boston College, Morrissey College of the Arts & Sciences, Environmental Studies Program, Chestnut Hill, MA, USA[6], College of Environmental Sciences and Engineering, Bangor University, Bangor, UK[7], Law School, University of Strathclyde, Glasgow, UK[8], Geography Department, King's College London, London, UK[9]
Orcid ids: 0000-0002-9387-0720[1]
Contact e-mail: e.woodhouse@ucl.ac.uk

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Rethinking entrenched narratives about protected areas and human wellbeing in the Global South

Emily Woodhouse[1]*, Claire Bedelian[2], Paul Barnes[1,3], Gisella S. Cruz-Garcia[4], Neil Dawson[5,6], Nicole Gross-Camp[7,8], Katherine Homewood[1], Julia PG Jones[9], Adrian Martin[5], Elisa Morgera[10], and Kate Schreckenberg[11]

[1]*Department of Anthropology, University College London, London, UK*

[2] *International Institute for Environment and Development, London, UK*

[3] *EDGE of Existence Programme, Zoological Society London, London, NW1 4RY UK*

[4] *Sowing Diversity = Harvesting Security, Oxfam Novib, The Hague, The Netherlands*

[5] *School of International Development, University of East Anglia, Norwich, UK*

[6] *Commission on Environmental, Economic and Social Policy, International Union for the Conservation of Nature*

[7] *Boston College, Morrissey College of the Arts & Sciences, Environmental Studies Program, Chestnut Hill, MA, USA*

[8]*Royal Botanic Garden of Edinburgh, Edinburgh, UK*

[9]*College of Environmental Sciences and Engineering, Bangor University, Bangor, UK*

[10]*Law School, University of Strathclyde, Glasgow, UK*

[11]*Geography Department, King's College London, London, UK*

* Corresponding author: e.woodhouse@ucl.ac.uk

Abstract

Attempts to link human development and biodiversity conservation goals remain a constant feature of policy and practice related to protected areas (PAs). Underlying these approaches are narratives that simplify assumptions, shaping how interventions are designed and implemented. We examine evidence for five key narratives: 1) conservation is pro-poor; 2) poverty reduction benefits conservation; 3) compensation neutralises costs of conservation; 4) local participation is good for conservation; 5) secure tenure rights for local communities support effective conservation. Through a mixed-method synthesis combining a review of 100 peer-reviewed papers and 25 expert interviews, we examined if and how each narrative is supported or

countered by the evidence. The first three narratives are particularly problematic. PAs can reduce material poverty, but exclusion brings substantial local costs to wellbeing, often felt by the poorest. Poverty reduction will not inevitably deliver on conservation goals and trade-offs are common. Compensation (for damage due to human wildlife conflict, or for opportunity costs), is rarely sufficient or commensurate with costs to wellbeing and experienced injustices. There is more support for narratives 4 and 5 on participation and secure tenure rights, highlighting the importance of redistributing power towards Indigenous Peoples and Local Communities in successful conservation. In light of the proposed expansion of PAs under the post-2020 Global Biodiversity Framework, we outline implications of our review for the enhancement and implementation of global targets in order to proactively integrate social equity into conservation and the accountability of conservation actors.

Keywords

conservation; development; ecosystem services; equity; governance; poverty; protected areas; social justice wellbeing,

Introduction

In 2010, State Parties to the Convention on Biological Diversity (CBD) agreed to increase protected areas (PAs) to 17% of terrestrial and inland waters and 10% of marine and coastal areas (CBD, 2010). Significant advances have been made towards this target (UNEP-WCMC, IUCN and NGS 2020). Support is coalescing around a global target for the post-2020 global biodiversity framework of 30% protection by 2030 (CBD, 2021) while the 'nature needs half'

52 campaign has also gained considerable momentum (Wilson, 2016). Recent studies reinforce the
53 global importance of well-managed PAs in protecting species richness and abundance (Gray et
54 al., 2016) and maintaining wildlife populations (Barnes et al., 2016). However, it has long been
55 recognised that while they may contribute to wellbeing at the global scale through the ecosystem
56 services they deliver such as carbon sequestration and hydrological functions (Cumming et al.,
57 2016), PAs can also bring costs as well as benefits to local populations (Balmford & Whitten,
58 2003). This is especially true for the rural inhabitants of the Global South, who can experience
59 opportunity costs (Poudyal et al., 2018), damage from wildlife (Green et al., 2018), and
60 displacement through eviction and cultural exclusion (Lele et al., 2010). Protecting 50% of the
61 Earth is likely to impact more than a billion people (Schleicher et al., 2019).

62 With the rise of the concept of sustainable development in the early 1980s and especially in the
63 wake of the 5th World Parks Congress in 2003, the idea that conservation and development are
64 interdependent became mainstream (Roe, 2008). It is now well accepted that the global good of
65 conservation should not be delivered in a way that harms local people, and should in fact respect
66 and contribute to the realisation of human rights (Morgera, 2018; UN 2018). The Durban Accord
67 developed at the 2005 World Park Congress goes further to state that PA management must
68 strive to reduce, and in no way exacerbate, poverty (IUCN, 2005). CBD Parties, in turn, have
69 emphasized the need for PAs to be established and managed through equitable processes that
70 recognize and respect the rights of indigenous peoples, local communities and vulnerable
71 populations (CBD, 2010). A suite of approaches such as ecotourism, compensation, alternative
72 livelihood schemes, community based natural resource management, and efforts to secure tenure
73 rights aim to meet these commitments on the ground. Calls to decolonise conservation have
74 become increasingly forceful in recent years, casting new light on debates around the rights of

75 Indigenous Peoples and Local Communities, participatory processes, benefit-sharing, social
76 justice and equity, not least through recognition of the neocolonial nature of many conservation
77 interventions (Aini & West, 2018; Trisos et al., 2021). There is urgent need to identify
78 conservation approaches most likely to strengthen synergies between social and ecological gains
79 that encompass equity and justice.

80 Studies examining the relationship between PAs and human wellbeing paint a rather mixed
81 picture of how policies have worked in practice. Controversy over PAs has partly been fuelled by
82 the variety and distribution of impacts, the different methods used to capture them, and the
83 different types of governance and management in place (Brockington & Wilkie, 2015). Reviews
84 of the social impacts of PAs (e.g. Pullin et al., 2013; Oldekop et al., 2015) have usefully
85 characterised the types of outcomes evidenced, but have not fully examined the processes
86 through which different outcomes arise for different social groups. A number of quantitative
87 studies have shown a generally positive impact of PAs on economic wellbeing (e.g. Andam et
88 al., 2010). While averaged material indicators allow analysis over larger scales, they miss valued
89 aspects of human wellbeing and ignore questions of equity. Recent approaches to the social
90 dimensions of PAs have taken a multi-dimensional view of human wellbeing that looks beyond
91 material circumstances, to a subjective evaluation of one's own life, and a relational component
92 that focuses on how people engage with others to achieve their goals (Coulthard et al. 2018).
93 Conceptualisations of equity have also expanded from looking at the distributional impacts to
94 encompass recognition of rights and values, and procedural aspects (Schreckenberg et al. 2016).
95
96 Despite sometimes polarised debate and contested evidence, attempts to link human development
97 and conservation goals remain a constant feature of policy and practice related to PAs (Hutton et

al., 2005; Roe, 2008). Underlying these approaches are stories or narratives that have persisted through time about the relationships between the wellbeing or actions of local communities and conservation outcomes. The power of such narratives lies in the way they simplify complex and uncertain situations, but can unhelpfully become 'blueprints' for interventions that are ineffective in particular contexts (Roe, 1991). Simplified stories serve to make decision-making more manageable and stabilise assumptions, becoming embedded in funding structures and networks of power (Blaikie, 2006). For example, in the case of Namibian conservancies, win-win narratives are important for "public showcasing of success" by donors and NGOs, making critique often unwelcome (Koot, et al., 2020). Acknowledging shortcomings and understanding complexities, however, is likely to ultimately improve the sustainability of interventions (Catalano et al., 2019).

In this paper we examine evidence for five common narratives that underlie and justify PA establishment or management. The first narrative is that because the poor are most dependent on ecosystem services, conservation interventions that protect ecosystems will alleviate poverty, i.e. they will be 'pro-poor' (Howe et al., 2018). On the flip side, the assumption that poverty reduction will reduce people's reliance on natural resources and therefore support conservation has underpinned popular integrated conservation and development projects (ICDPs) since the 1980s (McShane & Newby, 2004). Where harm to local populations is unavoidable, the notion that this can be sufficiently compensated for through economic schemes, has had material consequences, for example many millions of dollars being spent to offset the damage caused by wildlife around the world (Ravenelle & Nyhus, 2017). Participation by local communities is a mainstream idea in PA governance on the basis that it leads to more effective conservation than

top-down approaches (Agrawal & Ribot, 1999: though in practice "participation" ranges from largely rhetorical to genuine engagement). Finally, secure tenure rights over land and resources for communities are increasingly considered an important foundation for attaining positive conservation outcomes (Robinson et al., 2017). The five narratives are defined in Box 1.

Box 1: Definitions of narratives

N1. **Conservation is pro-poor**: Because poor people are disproportionately dependent on ecosystem services, PAs that protect or enhance those services will alleviate poverty

N2. **Poverty reduction benefits conservation**: Because poor people are disproportionately dependent on ecosystem services, improving their material wellbeing will reduce pressure on PAs

N3. **Compensation neutralises costs of conservation:** Unavoidable costs of PAs for local people can be adequately offset by providing appropriate compensation

N4. **Participation is good for conservation:** Local participation in PA governance is a route to more effective conservation

N5. **Secure tenure rights for local communities support effective conservation:** Secure and well-defined rights of tenure to land and resources underpin positive social and ecological outcomes in and around PAs

The objective of this paper is to examine *if* and *how* each narrative is supported or countered by the evidence from low and lower middle income countries. We use a mixed-method synthesis combining a critical review of recent relevant peer-reviewed literature and expert key informant interviews. We aim to capture wellbeing and equity outcomes across social, economic and political dimensions. In the context of ambitious aims for expanding PAs, better understanding of the complex trade-offs and synergies across social and ecological outcomes, will be vital in

133 negotiating and managing how post-2020 targets are translated into governance structures and
134 implemented on the ground. There is a growing recognition that conserved areas outside
135 formally designated PAs, such as indigenous and community managed areas, and privately
136 managed areas have a role to play in conservation (Dudley et al., 2018). In line with latest policy
137 we encompass the full range of PAs (IUCN, 2019), including these other conservation areas, in
138 both terrestrial and marine systems.

139

140 **Methods**

141 The narratives were identified during a two-day workshop through deliberative processes based
142 on participants' (conservation researchers and practitioners) knowledge. This involved
143 identifying possible narratives in small groups, then discussing their importance and popularity
144 in forming the basis for PA policy and practice based on participants experience and with
145 reference to international conservation policy documents. The narratives were subsequently
146 validated through a review of the websites of 169 conservation organisations operating in lower
147 and lower-middle income African countries and internationally (see Supporting Information,
148 Conservation organisations; Brockington & Scholfield, 2010) and through expert interviews (see
149 below). 138 of these organisations employed at least one of the narratives in materials that
150 described their work with more focus on N1 (118), N2 (108), N4 (84), than N3 (53) and N5 (39).
151 Interviewees stated high levels of familiarity with the narratives especially N2, N4 and N5
152 (Supporting Information, Interview validation). We chose a mixed methods approach to examine
153 the complex relationships between PAs and human wellbeing within each narrative. We
154 combined relevant elements of systematic reviews to select literature in a transparent and
155 unbiased way (Haddaway et al., 2015) but limited the sample of papers in order to allow more

156 depth of analysis, and carried out a narrative review more appropriate to capturing complexity,
157 process and context (Cornish, 2015; Mallett et al., 2012). On the principle that understanding
158 complex conservation issues will benefit from a range of evidence from different sources
159 (Adams & Sandbrook, 2013), and recognising the value of expert knowledge and experience
160 (Greenhalgh et al., 2018), we complemented the literature with key informant interviews with
161 conservation researchers and practitioners.

162 *Literature search*

163 To search the literature on the social outcomes of PAs we combined two databases of evidence.
164 First, we used a systematic map and database of 1043 studies published up to 2014 by McKinnon
165 *et al.* (2016) (available at https://natureandpeopleevidence.org), on the linkages between
166 conservation interventions and human wellbeing in terrestrial and marine systems. We selected
167 only peer-reviewed articles related to 'area protection' and/or 'area management' interventions
168 in low and lower middle income countries only as designated by the World Bank (Supporting
169 Information, World Bank Economies). We selected articles published after 2006 with a study
170 date after 2003, to capture recent studies more reflective of people-centred approaches to PA
171 conservation after the Durban Accord (2003) and the Millennium Ecosystem Assessment (2005).
172 Our search resulted in a set of 285 relevant articles. These were screened on full text based on
173 our exclusion criteria, reducing the set to 248 articles (Figure 1; Supporting Information,
174 Exclusion Criteria).

175 Second, we updated the database beyond 2014 with our own systematic literature search. We
176 used the same search terms as McKinnon et al. (2016), but limited the intervention search terms
177 to those related to PAs and other area-based conservation measures, drawing upon terms used in
178 Pullin et al's. (2013) systematic review of protected areas and supplementing these with our own.

179 Using Web of Science, we limited the search to English language, peer-reviewed articles,
180 published after 2014 (Supporting Information, Search Terms). The search retrieved 7096 articles.
181 These were imported into EPPI-Reviewer 4 and screened based on our exclusion criteria, first on
182 title and abstract, and second on full text, reducing the articles to 207. These were combined with
183 the 248 articles identified from McKinnon *et al*. (2016). Duplicates were removed and 10 papers
184 were excluded due to poor transparency of methods, resulting in a final set of 437 articles.

185 The 437 article abstracts (published between 2003 and 2017) were double screened for relevance
186 to one or two narratives (with primary and secondary relevance agreed), resulting in 138 papers
187 selected as relevant by two reviewers. Twenty papers were randomly selected from each set of
188 papers per narrative for data extraction. Where fewer than 20 of the papers had primary
189 relevance to one narrative, papers were selected from those that had secondary relevance. This
190 was the case for N2 (1 paper), N3 (1 paper), and N5 (2 papers). More papers were relevant to the
191 Pro-poor (N1) and Participation (N4) narratives than to the remaining three narratives (Figure 1).
192 The location of PAs in the 100 papers were weighted towards Africa (63) and Asia (36), with
193 only one paper from the Americas, and none from Oceania or Europe. This reflects both the
194 disproportionate number of African and Asian countries categorised as low and low middle
195 income (Supporting Information, World Bank Economies), and publishing bias. 16 African
196 countries and 9 Asian countries are represented in the papers but with certain countries
197 disproportionately represented: Tanzania (18); India (12); Nepal (10). Each paper was reviewed
198 using a standard coding tool developed in Google Forms to extract and categorise the data
199 relating to the study, PA, social outcomes, and narratives (Supporting Information, Codebook).

200 *Expert interviews*

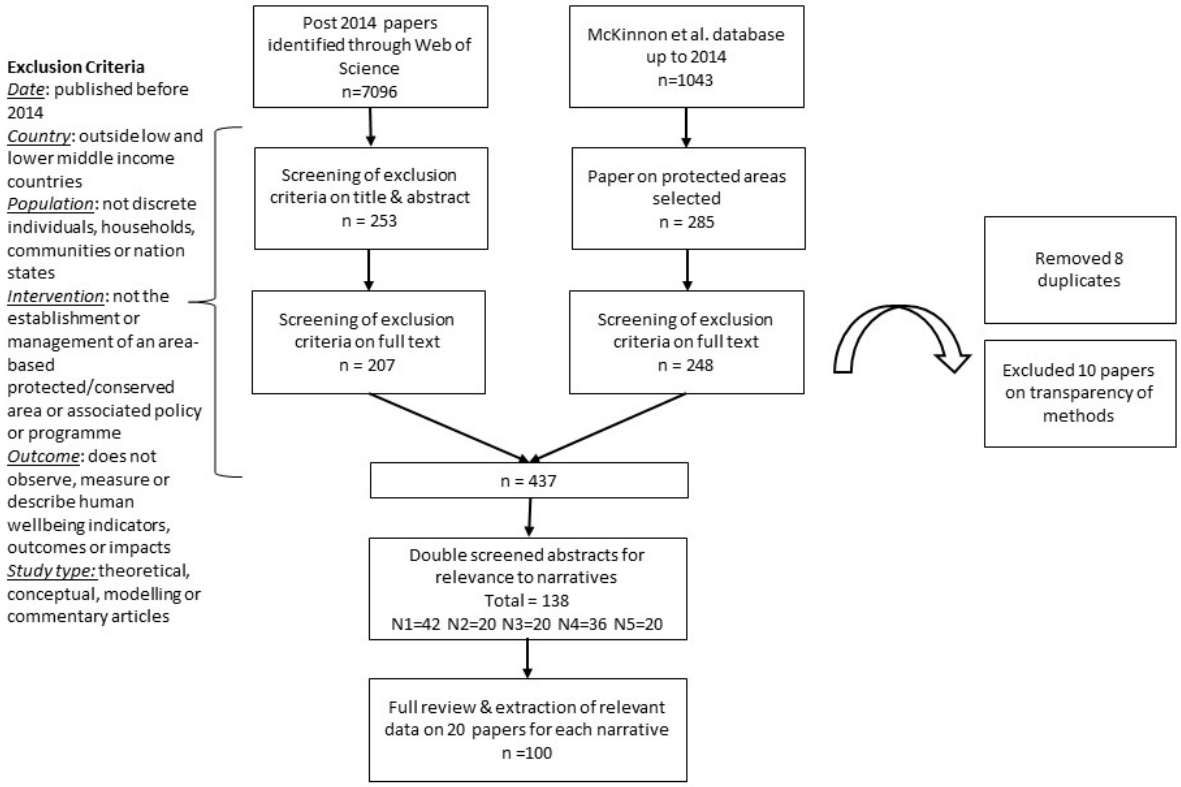
We carried out a total of 25 semi-structured interviews (either in person or on video call), including 8 with academic researchers working on projects funded by the Ecosystem Services for Poverty Alleviation (ESPA) programme (ESPA, no date) and 17 with contacts of the authors working outside of academia. Interviewees were selected with the aim of achieving representation from different types of organisations across the globe, including international and in-country NGOs, state agencies and research organisations (Supporting Information, Non-academic interviewees) and for their experience in the governance of PAs and/or understanding their impacts. Interviewees were asked about their familiarity with each of the narratives and experience of their validity (Supporting Information, Interview questions). Interviews captured expert knowledge, long-term field experience, and supported the identification and interpretation of key themes across the narratives.

Narrative synthesis

The publications that were randomly selected encompassed a range of designs, methods and data types (quantitative and qualitative), which was useful in exploring causal linkages, processes of change and contextual factors (Woodhouse et al., 2015). We assumed a level of quality through the peer-review processes of the journals, and used our expertise in the social sciences to assess the weight of evidence in support of the narratives in each paper which was categorised into strong (results fit the narrative with little deviation), partial (results are mixed or do not demonstrate the narrative in full) or none (results provide no support). Data from both the literature and interviews were combined in the analysis. A narrative synthesis aims to provide insight and deepen understandings rather than conventional systematic reviews which aim to answer specific questions (Greenhalgh et al., 2018). We took a thematic synthesis approach (Snilstveit et al., 2012) annotating and identifying themes within the extracted data, and refining

224 them in an iterative process. The findings are organised around these themes for each of the
225 narratives in the text below and summarised in Table 1. The author carrying out the narrative
226 review for each narrative reread the papers, extracted data, and interview transcripts, and the
227 support categorisation and narrative text were discussed and agreed with the lead author.

228



229

230 Figure 1: Screening process and number of articles at each stage

231 **Narrative 1: Conservation is pro-poor**

232 This narrative asserts that since it is the poorest people who are most dependent on ecosystems
233 for their livelihoods, biodiversity conservation through PAs can alleviate material poverty by

234 securing provisioning ecosystem services (ES) such as food and fuel, and regulating services
235 such as clean water (Turner et al., 2012; Roe et al., 2019). This narrative would suggest that
236 when there is loss of access to extractive uses economic benefits can come through tourism or
237 payment mechanisms, for example Wildlife Management Areas (WMAs) are assumed to reduce
238 poverty through increased income revenues from wildlife (Keane et al., 2020).

239 Of the twenty selected papers, three provided strong support for the narrative, with five showing
240 no support or providing evidence against, and a further 12 showing some support but with mixed
241 (positive and negative) or weak effects (Figure 2). Interviewees were divided in their support
242 (Figure 3). The explanation for these divergent results rests on several factors. First, the extent
243 that PAs are pro-poor centres on people's access to ecosystem services and their benefits, in turn
244 dependent on the management system which can range from strictly protected to community-
245 managed areas.Although some services can benefit all across a landscape (e.g. flood protection),
246 the negative impact of exclusion for other services was evident in our sampled papers in both
247 terrestrial (Mohammed & Inoue, 2013; Vedeld et al., 2012) and marine PAs (Moshy et al.,
248 2015). The poor living in and around PAs are also more exposed to ecosystem 'disservices' from
249 wildlife such as crop-raiding (Amin & Koné, 2015; Vedeld et al., 2012) which can have wide-
250 ranging and hidden impacts such as on psychological health and education (Tumusiime &
251 Vedeld, 2015).

252 Nine of our interviewees questioned the logic of the narrative: the poor often do not benefit from
253 ecosystem services from a PA, and in fact are more likely to lose out. The wealthy are better
254 placed to benefit due to their higher capacity to capture resources and bypass access restrictions,
255 especially if governance is weak. The papers that disaggregated data according to wealth
256 supported this idea. For example, compared with poorer households, wealthy households

participate more in Payment for Ecosystem Services (PES) schemes in PAs in Cambodia (Beauchamp et al., 2018), benefit more in terms of food security from community-based natural resource management (CBNRM) in Tanzania (Pailler et al., 2015) and access benefits from devolved forest management in Ethiopia (Mohammed & Inoue, 2013). Indigenous groups who are already socially marginalised are at particular risk of disproportionate harms if they are not given special protection, such as the Twa whose livelihoods and culture are intertwined with native forests in Rwanda (Dawson & Martin, 2015). The poorest and landless are more dependent on resources from PAs, and by necessity have to risk fines and imprisonment where there are legal restrictions (Tumusiime *et al.*, 2011; Dawson & Martin, 2015). Tourism benefits are also prone to elite capture without redistribution policies in place (Richardson et al., 2012; Tumusiime and Vedeld, 2015; Beauchamp *et al*., 2018).

Where poor local residents are not excluded from the benefits of conservation, the papers showed limited evidence that PAs are a pathway out of poverty, a message reflected in literature on linkages between ecosystem services and poverty alleviation (Turner *et al.*, 2012; Suich *et al*., 2015). PAs more readily act as a social safety net preventing further poverty. For example, those most reliant on income from Chiradzulu Forest Reserve, Malawi, are among the poorest, who have little education, more dependents, fewer assets, and are more likely to be women (Kamanga et al., 2009). The provision of forest products to the poor from Kibale National Park, Uganda protects them against desperation sales of farm land and thus sinking deeper into poverty (Naughton-Treves et al., 2011). One paper in our sample showed neutral impacts on food security (Darling, 2014), and Canavire-Bacarreza & Hanauer (2013) show an average reduction in poverty in municipalities in Bolivia that have at least 10% of their areas covered by PAs. These papers represent a growing body of robust quantitative research providing evidence that

some PAs in the Global South can reduce poverty or at least do not necessarily increase it especially where there is tourism and or the PA is not strictly protected (e.g. Andam et al., 2010; Naidoo et al., 2019; Sims & Alix-Garcia, 2017) but do not look beyond objectively measured average material poverty and health.

The papers in our sample that showed strong support for the narrative used variables and metrics centred on material wellbeing (Kamanga et al., 2009; Naughton-Treves et al., 2011) with the exception of Canavire-Bacarreza & Hanauer (2013) who measured average effects on a poverty index which incorporates education and health. Research that looked at changes in diverse aspects of wellbeing (e.g. non-use values, food security, empowerment) paints a more complex picture with gains in some variables and losses or no change in others (Amin & Koné, 2015; Pailler et al., 2015; Tobey & Torell, 2006). Likewise, interviews suggested that the most important costs and benefits for wellbeing and local support for PAs may not be material, for example cultural knowledge or a sense of autonomy. Gurney et al. (2014) highlight this point: despite a positive impact on livelihood diversity and wealth from marine PAs in Indonesia, subjective wellbeing was negatively affected most likely due to increased conflict and unmet expectations.

To fully understand the impacts of PAs, consideration must be given to the wider spatial, temporal and socio-economic context. The effect of PAs may be relatively limited where there are strong drivers of poverty or development related to market access, land policy and population changes (Vedeld et al., 2012; Beauchamp et al., 2018). Dawson & Martin (2015) highlight how positive outcomes for biodiversity and wellbeing are in part dependent on the governance of the wider landscape outside of PAs and therefore provision of alternative vital resources. Studies that investigate impacts at different scales show that the validity of the narrative can change through

303 time and space with trade-offs involved. Those closest to PAs or in more accessible areas tend to
304 access benefits derived from ecosystem services such as income (Kamanga et al., 2009) or
305 tourism infrastructure (Akyeampong, 2011), but are also exposed to the damage from wildlife
306 (Tumusiime & Vedeld, 2015). Temporal dynamics affect how benefits are realised: for example,
307 benefits may be felt most during implementation when funding is available (Gurney et al., 2014),
308 or conversely may take time to be realised (Pailler et al., 2015). Positive benefits from long-term
309 sustainability involve time-lags and in the case of mangrove protection, counteracted immediate
310 losses of resources but with uncertain trajectories (McNally et al., 2011).

311 Overall, our analysis suggests that it is possible for PAs to alleviate material poverty but the
312 extent to which the PA will benefit the poor depends on a range of factors including restrictions
313 to locally important ecosystem services (especially provisioning services), whether local people
314 have the capability (related to wealth and status) to benefit from ecosystem services, and how the
315 PA and wider landscape is governed.

316

317 **Narrative 2: Poverty reduction benefits conservation**

318

319 The idea that resource overexploitation is a response to poverty was first popularised amongst
320 conservationists in the World Conservation Strategy of 1980 (IUCN, UNEP, & WWF, 1980) and
321 since then has formed the basis for an instrumental argument that poverty alleviation should be
322 integral to conservation initiatives. This narrative, to varying extents, underpins integrated
323 conservation and development projects (ICDPs), alternative livelihoods, and revenue sharing
324 schemes from ecotourism. There are two principal rationales for such programmes: first, to
325 provide economic substitutes that reduce reliance on natural resources and lessen

environmentally damaging behaviours; and second, to increase local acceptance and support for conservation, creating positive change in attitudes and behaviours (Spiteri & Nepal, 2006).

There was mixed support for this narrative in our sampled literature and our interviewees were divided on its validity. Several papers did show how schemes designed to improve people's material wellbeing positively influenced attitudes towards conservation (e.g. Nepal & Spiteri, 2011; Solomon et al., 2012), but this did not extend to strong evidence of change in behaviour or biodiversity outcomes. Those papers which studied behaviour showed some effects on reported extractive activities which were small and inconsistent (Torell et al., 2017) or reflected potential confounding factors (Solomon et al., 2012). Ecological outcomes were not maintained in the longer term (Aheto et al., 2016) or were not clearly linked to social improvements (Sheppard et al., 2010). The relationship between conservation attitudes and behaviour is not straightforward, and the evidence highlighted the need to understand not only attitudes towards conservation but towards PA staff and conservation organisations which can be instrumental in creating support (Nepal & Spiteri, 2011).

The experience of our interviewees suggests that the narrative is more valid when people perceive a direct link between the PA and benefits they receive. This linkage can be achieved in two main ways; first where the livelihood intervention is materially dependent on effective conservation (ecotourism, agro-forestry and resource access), and second where there are economic incentives such as the conditionality of PES payments. In fact, the PES concept emerged as a counter-narrative to the assumption that support for local incomes automatically enhances conservation effectiveness, instead arguing that such support needs to be conditional on conservation performance (Ferraro & Kiss, 2002). Our sample included seven papers which looked at interventions in the former category but positive effects were not more strongly

evidenced than in other livelihood schemes. A case study provided by an interviewee documents one positive example: in the Amani butterfly project in northern Tanzania, successful butterfly farming relies on the existence of the PA natural forest and income from butterfly farming was positively associated with participation in forest conservation (Morgan-Brown et al. 2010). Farmers perceive a link between butterfly farming income and forest conservation, thus motivating behaviours such as tree planting and reporting of illegal activities. Although having a more logical basis, our interviewees suggested that in reality the socio-economic conditions conducive to such an arrangement are rare. The literature also suggests that these projects are no less susceptible to failures in implementation such as administrative delays, lack of technical support, and unequal distribution of benefits which can all lead to erosion of trust and cooperation (Thapa Karki, 2013; Acheampong et al., 2016). Our two sampled papers on PES, show that conditionality provides a better guarantee of positive environmental outcomes but impacts on poverty are dependent on the magnitude of payments which can often be small, and there is a tendency for benefits to be captured by elites (Clements & Milner-Gulland, 2015; Hegde & Bull, 2011).

Providing benefits is not a guarantee of attitude and behaviour change. In many cases, especially where time is not a limiting factor, these livelihoods will supplement rather than substitute resource extraction. Where there are big risks associated with conservation such as human-wildlife conflict, these may be a barrier to changing attitudes even where people are benefiting (Gubbi et al., 2008). On the other hand, where there are large economic gains from alternatives, they may have the unintended consequence of exacerbating pressure on PAs by encouraging in-migration or reinvestment (Bedelian & Ogutu, 2017; Kumar et al., 2011). Livelihood decisions are driven by a range of factors beyond economic costs and benefits. Projects implemented with

372 little regard to local community needs or cultural identities which may be closely tied to
373 resource-dependent livelihoods such as fishing are more likely to fail (Katikiro, 2016). In marine
374 PAs in the Philippines, where economic expectations are not being met this has led to negative
375 attitudes towards conservation. Chaigneau & Brown (2016) suggest in this case that it is more
376 realistic and sustainable to emphasise non-material bequest and aesthetic values which also
377 produce positive attitudes and action against illegal fishing.

378 Another key consideration is the differentiated nature of resource users. Although the poorest
379 may be more dependent on natural resources, the wealthiest may be the heaviest extractors
380 (Sassen, et al., 2013) and able to circumvent access restrictions (Naidu 2013). As one
381 interviewee pointed out, this creates a tension between strategies that will have the best outcomes
382 for biodiversity and for poverty alleviation. Similarly, high natural resource dependency and
383 lower social status for those in poverty restrict their ability to participate in poverty reduction
384 programmes (Marshall et al., 2010; Thapa Karki, 2013). There are often larger forces at work in
385 creating conservation problems at multiple organisational levels. Targeting only the livelihoods
386 of local communities does not address wider drivers of unsustainable extraction such as
387 fluctuating prices and political instability (Sassen et al., 2013).

388 Livelihood based interventions continue to attract significant donor funding (Roe et al., 2015).
389 While improving livelihoods is a good thing in its own right and can foster improved
390 relationships and trust between communities and conservationists (Stern, 2008), there is a lack of
391 evidence that this will inevitably result in improved ecological outcomes. In designing these
392 projects, there is a need to understand the drivers of unsustainable resource extraction, the
393 livelihood profiles of communities and the priorities of resource users. In theory, projects that
394 link livelihoods to biodiversity and local people and/or involve conditionality are more likely to

succeed in terms of ecological outcomes, but this may involve trade-offs with poverty alleviation.

Narrative 3: Compensation neutralises costs of conservation

This narrative accepts that there are unavoidable local costs to conservation in the form of access restrictions and human-wildlife conflict, and assumes that these can be effectively offset thus fulfilling the 'do no harm' principle (Roe et al., 2010). Compensatory approaches such as payments for harm caused by wildlife, resettlement, revenue sharing and development schemes, are driven not only by social justice concerns but also by efforts to reduce conflict and create positive attitudes towards conservation (Springer, 2009; Dickman et al., 2011). Increasingly, conservation is funded by major international donors who have explicit commitments to safeguard against negative social impacts and compensate for economic losses (IFC, 2012).

None of the reviewed literature was strongly supportive of this narrative with only five papers providing some evidence that compensation is supported by local communities and at least partially offsets costs. The reasons related to both the compensation itself and the way in which schemes are implemented. First, the assumption that material compensation is commensurate with losses incurred from PAs is problematic. Compensation is often considered insufficient and not reflective of market values. In our sampled literature this was the case for compensation provided for a range of impacts including livestock loss (Bhattacharjee & Parthasarathy, 2013; Ogra & Badola, 2008), constraints on forest activities (Bidaud *et al.*, 2017), and crop-raiding (Vedeld et al., 2016). Material compensation is incommensurate with cultural losses. For example, although Twa communities received material benefits from revenue sharing from

418 Bwindi National Park, they have lost social freedoms and cultural heritage associated with
419 hunting (Martin et al., 2015). In Madagascar, many older households would be unwilling to stop
420 the practice of swidden agriculture (*tavy*) in exchange for compensation, due to its socio-cultural
421 value (Desbureaux & Brimont, 2015).

422 Material and monetary compensation is often provided for restricted access to land and
423 displacement by PAs, but may not account for material and non-material wellbeing losses. For
424 example, land in resettlement villages was not perceived to be of comparable quality or quantity
425 to that lost due to displacement from Suklaphanta Wildlife Reserve in Nepal, causing increased
426 workloads, limited social interactions, and reduced subjective wellbeing (Lam & Paul, 2014).
427 Land has cultural meaning, and places are intertwined with a sense of security, belonging,
428 spirituality and identity that cannot be substituted (Lam, 2011; Torri, 2011). Nevertheless, if
429 community needs and aspirations are met, it is possible that resettlement can be carried out in a
430 way that does not undermine people's rights and wellbeing. For example, due to declining
431 pastoral productivity and conflict with tigers, resettlement was the preferred option for Gujjars in
432 Nepal if it was associated with enhanced benefits including larger resettled land sizes,
433 strengthened property rights and improved housing (Harihar et al., 2015).

434 Although there was a mixture of views among our interviewees on the validity of this narrative,
435 those that agreed were cautious in their support due to the difficulties in quantifying the meaning
436 that livelihood practices hold, the practical challenges in administering compensation, and
437 unfulfilled promises made by government agencies. But several respondents explained how
438 compensation can play an important role and provide a level of legitimacy for PA interventions,
439 where there are tangible losses such as to livestock and agriculture. In a human-wildlife conflict
440 compensation scheme in India, despite numerous shortcomings, respondents still supported a

441 reformed compensation approach where conflict cannot be avoided (Ogra & Badola, 2008). The
442 prevalent view amongst our respondents was that although not sufficient as a standalone
443 approach, appropriate and timely compensation can be an important element of conservation if
444 reinforced with greater engagement and recognition of costs. This should involve commitment
445 that goes beyond the provision of one-off payments to include, for example, preventative
446 measures to reduce human-wildlife conflict. However, two respondents raised the point that the
447 whole idea of compensation removes power and incentives away from communities to manage
448 ecosystems sustainably.

449 Even if compensation can work in theory, in practice schemes are often poorly implemented and
450 administered. The process of claiming compensation can be long and tedious involving elaborate
451 paperwork (Bhattacharjee & Parthasarathy, 2013) and high transaction costs (Ogra & Badola,
452 2008). Where development projects are implemented, there can be a temporal mismatch whereby
453 costs from resource access restrictions are immediate but the benefits take time to emerge
454 (Bidaud et al., 2017). Limitations on the wildlife species included in compensation schemes or
455 inappropriate methods to estimate compensation result in insufficient compensation (Bayani et
456 al., 2016). Governments may fail to honour their commitments where compensation is not
457 enshrined in policy or is associated with problems of corruption (Ogra & Badola, 2008).
458 Inadequate or delayed compensation can develop deeply held grievances resulting in retaliatory
459 killing of wildlife (Seifu & Beyene, 2014).

460 There is significant evidence of distributional inequity in compensation programmes.
461 Development programmes may not reach those experiencing the greatest costs from PAs, but
462 instead cluster around village and tourist centres, exacerbating economic inequalities (Bidaud et
463 al., 2017; Tumusiime & Sjaastad, 2014). There are often barriers to the most vulnerable groups

464 accessing compensation. Households receiving compensation tend to be larger and wealthier
465 (Ogra and Badola, 2008), more food secure, better socially connected, and live in more
466 accessible areas (Poudyal et al., 2016). Women and the poor face greater difficulty in accessing
467 compensation since they lack official title to land, awareness of schemes, literacy, time and
468 familiarity with bureaucratic procedures (Ogra & Badola, 2008; Lam & Paul, 2014). Even where
469 monetary compensation reaches the poor, they may not have the capacity to reinvest in buying
470 land and restoring livelihoods (Hall et al., 2014). The result is that marginalised groups receive
471 the least from compensation, if anything at all, even in cases where safeguarding procedures are
472 in place to ensure the contrary (Poudyal et al., 2016).

473 In summary, the evidence rejects the idea that compensation as implemented is enough to
474 substitute for experienced costs that often encompass non-material aspects of wellbeing and
475 injustices. This does not mean that compensation is unnecessary, but it is rarely sufficient or
476 commensurate. In addition, compensation mechanisms often do not work in practice,
477 undermining social justice and support for conservation. Furthermore, our review suggests that
478 there are situations in which compensation will never be commensurate with the loss incurred,
479 thereby demanding greater openness to culturally appropriate alternatives.

480

481 **Narrative 4: Participation is good for conservation**

482

483 There are two inter-linked reasons why participation is assumed to be instrumental to effective
484 conservation. Firstly, participation can empower local communities to govern resources
485 sustainably, an argument that owes much to research into governing commons (Ostrom, 1990)
486 and the value of local knowledge (Berkes, 1999). Secondly, participation may motivate local

487 support and stewardship by providing economic and non-economic benefits (Agrawal & Ribot,
488 1999). In other words, this narrative holds that participation can provide both the opportunity and
489 the motive for communities to support conservation.

490 Such a narrative has ensured that participation became a central tenet of mainstream PA
491 governance policy (IUCN 2005). In international law it has also been clarified that procedural
492 rights (access to information, participation in decision-making and access to justice) need to be
493 respected in the designation and management of PAs (UN, 2018). The participation narrative has
494 not gone completely unchallenged: a counter-narrative emerged around the turn of the century,
495 questioning the effectiveness of participatory and community-based conservation (Hutton *et al*.,
496 2005). In development studies some proclaimed participation a 'new tyranny' that served to
497 reinforce unequal power relations and state control (Cooke & Kothari, 2002).

498 In our sample of 20 articles, 18 were judged to support the narrative although only three showed
499 a strong link between participation and ecological outcomes. This was reflected by the
500 interviews, where all respondents agreed with the narrative, except two who remained neutral.
501 This body of research largely confirms that participation contributes to both motivation and
502 capacity to support conservation, but also qualifies this in terms of the range of benefits that can
503 motivate local people and the quality of participation that is required to empower people.
504 Motivations for participation appear to vary across cases, and across different social groups.
505 Participation can be motivated by expected livelihood benefits (Coulibaly-Lingani et al., 2011;
506 Macura et al., 2016; Musyoki et al., 2016), but there are also several cases in which participatory
507 conservation fails to deliver livelihood benefits yet is still valued for other reasons such as
508 improved social capital (Barnes-Mauthe et al., 2015), and sense of control (Gross-Camp, 2017).
509 According to one study, material motives are more important to men, whilst social motives are

more important to women (Himberg et al., 2009). Whilst women may value participation for non-economic reasons, they are often less able to participate, due to constraints on their time or social barriers to taking on public roles (Coulibaly-Lingani et al., 2011; Gustavsson et al., 2014; Khadka & Nepal, 2010; Musyoki et al., 2016; Tran & Walter, 2014). As confirmed by interviewees, participation can thus impose a social cost due to lost time or livelihoods that outweigh the benefits of participating, so transaction costs need to be minimised. On balance, the evidence confirms that the opportunity to participate in PA management is widely valued by local communities.

The studies reviewed show us that the linkage between participation and effective conservation is not contingent on delivering livelihood benefits, but can arise from either satisfying other needs and interests and /or triggering community capacity to control resource use. For example, a forest co-management programme in Malawi was found to have no short or medium term effect on household incomes, but participating households still cleared less forest than non-participants (Mazunda & Shively, 2015). Similarly, participatory forest management in Tanzania did not provide measurable gains in wellbeing but forest governance was improved by reviving the community's capacity to exclude outsiders (Gross-Camp, 2017). Whilst community rights may be sufficient to unlock local capacity to manage resources, a study of marine fisheries in Kenya found that community co-management rights only led to positive ecological outcomes in conjunction with the establishment of no-take marine reserves highlighting the need for conducive socio-economic conditions and institutional capacities of communities (Cinner & McClanahan, 2015).

The reviewed studies show that local contexts lead to variation in what motivates participation and what communities can achieve with rights to participate. One finding that is consistent

533 across all of the studies and confirmed in interviews, is that the quality of participation is crucial
534 in determining both motive and capacity for conservation (Freed et al., 2016). Participation is
535 often tokenistic and superficial and this is recognised by communities as constraining what they
536 can achieve. Interviewees highlighted that meaningful participation means having the power to
537 effect change regarding ecosystem governance. In a survey in the Taita Hills, Kenya, 33% of
538 respondents identified the superficiality of participation as the greatest constraint on forest
539 conservation (Himberg et al., 2009). In both of the negative cases in our sample, the quality of
540 participation is a key factor in undermining benefits to communities although there is evidence
541 that ecological outcomes are positive at least in the short-term due to access restrictions (Noe and
542 Kangalawe, 2015; Katikiro et al., 2015). Four papers that were categorised as partially
543 supportive showed that superficial participation had negative implications for sustainability. In
544 the study of Wildlife Management Areas (WMAs) in Tanzania, participation was manipulative,
545 disempowering and went hand in hand with demonstrable harm to local livelihoods (Noe and
546 Kangalawe, 2015). However, as highlighted in the interviews, participation is an evolving
547 process, and one that needs sufficient time and resources to allow people to build relationships
548 and negotiation skills, a point evidenced in the broader literature (Brechin et al., 2002;Wright,
549 2017).

550 Our interviewees highlighted that the time, capacity and resources required for effective
551 participatory processes often require the support of external agencies who can share the costs.
552 For example, multi-community partnerships in marine PA sites in the Comoros, involving
553 networks of communities, government and NGO actors, facilitated cooperation in fishery
554 management ensuring all communities cooperated in fishery management on an equal footing
555 (Freed et al., 2016). Similarly, participation in marine PA sites in Indonesia was more extensive

556 if management groups were supported by external institutions, such as through partnership with
557 NGOs, academia and other community groups (Gurney et al., 2016). However, internal power
558 structures will affect how participation takes place. Working through established customary
559 governance arrangements is an effective route to establishing participatory conservation, but
560 without mediation to steer negotiations towards inclusive governance, minority interests may get
561 sidelined with repercussions for long-term sustainability (Steenbergen, 2016).
562
563 In summary, this narrativeis supported by our review, although there is limited evidence linking
564 participation to ecological outcomes. Based on our findings we would qualify the narrative
565 somewhat, such that participation supports PA effectiveness where it genuinely empowers
566 communities and provides benefits that are locally valued and equitably distributed.
567
568 **Narrative 5: Secure tenure rights for local communities support effective conservation**
569 Secure tenure rights are increasingly considered an important foundation for attaining positive
570 conservation outcomes as they may increase the local legitimacy of and participation in
571 conservation governance, promote the sustainable use of resources and foster local
572 environmental stewardship against internal and external pressures (Larson & Springer, 2016;
573 Robinson et al., 2017). The scope of legitimate tenure rights is not limited to individual property
574 rights, which are often afforded greater legal status. Prominent theories, frameworks and
575 international policy guidance defining tenure specifically include multiple types of tenure, and
576 pivotally for conservation practice this includes customary and communal regimes and
577 institutions (Schlager & Ostrom, 1992), that are often side-lined as they comprise “informal
578 arrangements” and “unwritten customs and practices” (FAO, 2012). Increasing attention to

security of tenure rights in conservation policy has resulted in the enhanced inclusion of areas managed by local communities within the global PA network (Dudley et al., 2018). Indigenous peoples already manage more than a quarter of the world's land area but may struggle to protect these areas due to weak rights (Garnett et al., 2018). Clear and secure tenure rights are also pivotal for policy instruments such as PES or Reducing Emissions from Deforestation and forest Degradation (REDD+) to determine who is eligible to receive benefits and who is responsible for meeting contractual obligations (Sunderlin et al., 2014). Although absent in the Millennium Development Goals, tenure rights appear in five of the Sustainable Development Goals (Land Portal, 2019).

Of the 20 sampled articles addressing this narrative, none provide opposing evidence while 11 provide strongly supportive evidence. Six of those evidence a positive association whereby recognition of tenure rights leads to enhanced social and ecological outcomes, whereas five exhibit a negative association through which violation of or insecurity caused to local communities' tenure rights through externally-driven conservation interventions produces negative social and ecological outcomes. A further eight studies provide partial support for the narrative but assume the positive or negative social impacts promote or harm conservation respectively, without providing specific evidence. The one remaining study suggests that secure individual property rights enhance conservation, though without paying any attention to other forms of tenure or potential social impacts of favouring a formal, individual tenure system (Brännlund et al., 2009). Interviewees were also largely supportive of this narrative.

601 This set of cases highlights the pivotal importance of both tenure security based on customary
602 and communal systems and of the scope of local influence in governance processes. At the most
603 basic level, negative associations tend to occur when conservation interventions negate user
604 rights with no regard for local needs or customary and communal institutions. In this situation,
605 when a hegemonic model of conservation overrides existing systems through which rights are
606 allocated among local communities, imposed structures may have negligible legitimacy and be
607 entirely disregarded so that conservation goals are not met (Hyakumura, 2010; Roy et al., 2013;
608 Yami et al., 2013). For example, where conservation interventions recognise only legal or
609 individual property rights as compatible with conservation rules and override customary and
610 communal local institutions, this may favour more powerful local or non-local actors to the
611 detriment of vulnerable groups including the poor, women and cultural minorities. Those
612 requiring access to support livelihoods or engage in cultural practices may act in defence of their
613 needs and rights by seeking to establish an alternative to exclusive conservation rules, often
614 through negotiation with alternate authorities such as sympathetic local government officials, as
615 described by Rahman et al. (2014) in Bangladesh. Such a situation can open the door to elite
616 collusion and capture because the conservation intervention triggers a renegotiation of tenure
617 rights, threatening ecological integrity both outside of and within PAs (Awung & Marchant,
618 2016; Phuc, 2009). Instances of negative social and ecological outcomes resulting from imposed
619 tenure regimes were also evidenced through contemporary governance approaches such as
620 REDD+ (Awono et al., 2014; Scheba & Rakotonarivo, 2016).
621
622 The evidence suggests that to establish appropriate tenure security and sufficient rights to foster
623 effective local stewardship, locally supported institutions that may have formed over long

timescales need to be embedded within conservation structures that give sufficient confidence they will endure. Clear positive examples among the sample studies of recognising rights by embedding local tenure institutions within conservation included the Kasigau Corridor REDD+ project in Kenya that recognised communal forest tenure regimes (Atela et al., 2015), and the engaged stewardship and mobilisation of resistance to unsustainable logging in Cambodia (Clements et al., 2014). Where secure tenure supports local livelihoods and fosters effective local stewardship it can be particularly important to protect those governance structures. For example, weakening of rights for betel nut growers in Soppinabetta forests in the Western Ghats of India to control resource use on their land led to many selling it for extractive development (Sinu et al., 2012).

It is also important to consider the extent of rights granted to different groups of people, looking beyond basic user rights to address rights of control and authority that determine who has power to make decisions about resource allocation and influence governance structures (Sikor et al., 2017). Provision of use rights alone may not be enough to prevent tenure insecurity arising, because if people fear those rights are likely to be removed or overruled and they lack any power to block those decisions, positive feedbacks for conservation may be foregone, as exemplified by Davis (2011) for Maasai pastoralists impacted by a Wildlife Management Area in Tanzania. Indeed, three interviewees highlighted difficulties for pastoralist groups whose dynamic and seasonal customary systems of land and resource rights may be threatened through tenure formalisation processes. To nuance these findings further, several studies highlight the dangers of romanticising local institutions and their ability to govern natural resources adaptively and inclusively, particularly because management capacity and local cohesion may be lacking in the

face of numerous drivers of social and institutional change at the local level (Nagendra & Gokhale, 2008; Yami et al., 2013).

Our review also revealed the need to explore not just tenure systems but perceptions about the security of tenure rights, which can be a key determinant of behavioural change, even when tenure arrangements appear stable. Local perceptions of tenure security can be highly influenced by past experiences of policies enacted by states or colonial powers, and conservation interventions can be perceived as extensions of them (Chomba et al., 2015; Gbedomon et al., 2016). Even if conservation authorities are trusted, perceived tenure security may be weak where the central government has a record of overriding them, for example through the proliferation of land concessions for commercial, infrastructure and extractive industries in Cambodia (Clements et al., 2014).

In summary, secure tenure rights can empower communities to sustainably manage resources and participate in effective ecosystem governance. However, respect for customary and communal access systems, and trust in the governance arrangements are critical for success.

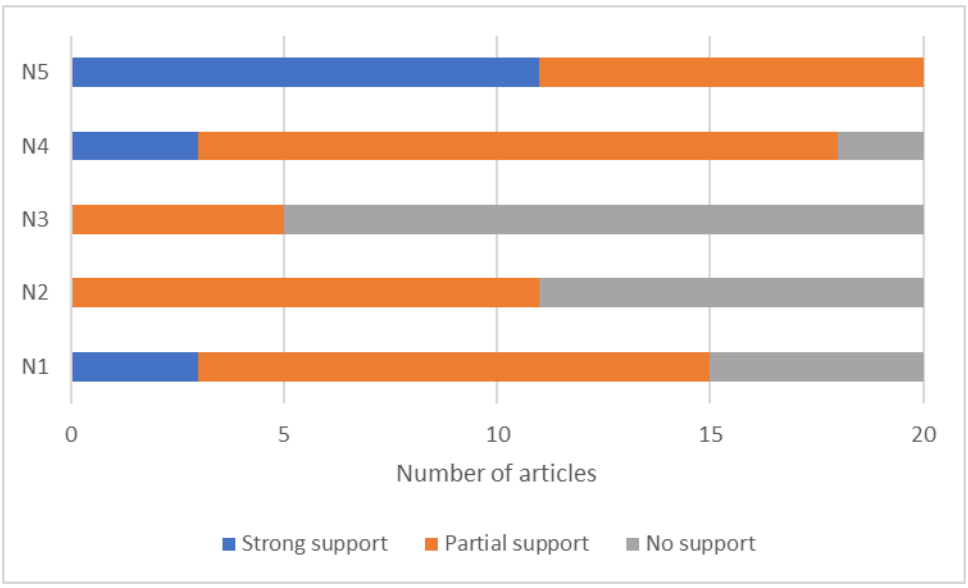


Figure 2: Level of support shown by articles for each narrative

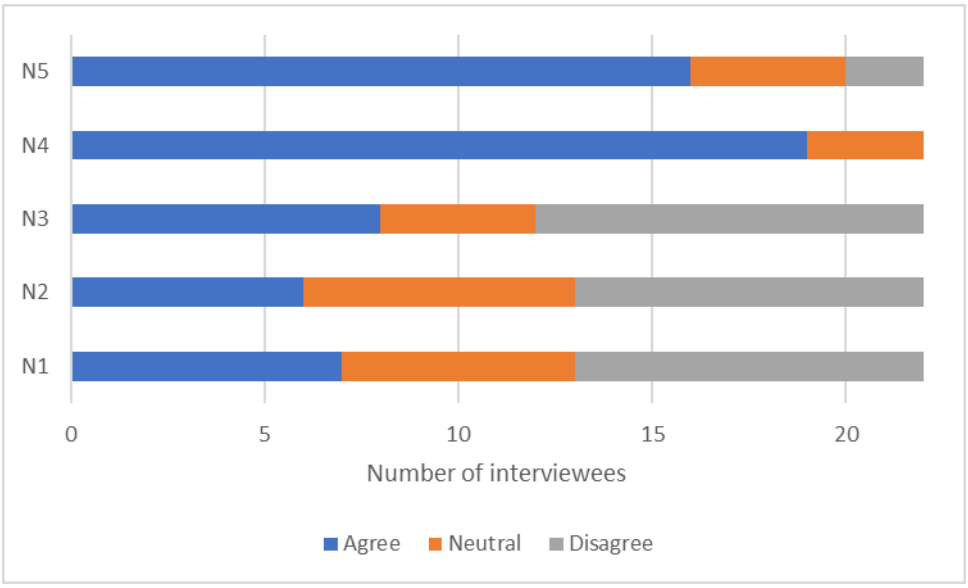


Figure 3: Interview responses on the validity of each narrative. n=22 as 3 interviewees chose not to answer these closed ended questions in the interviews

Discussion

Our review shows that, in their simplest forms, commonly employed narratives linking protected areas to human wellbeing are not borne out in practice and a range of factors add complexity to the narratives. Crucially, our review illustrates that the model of conservation that is legitimated by simplistic versions of these narratives can inhibit the attainment of both the wellbeing of Indigenous Peoples and Local Communities and, ultimately, effective nature conservation. The findings suggest those involved in conservation need to critically examine the political nature of the ideas they adhere to, the way they are used to justify interventions and their means of implementation, and serve to obscure local voices and experiences. Reductionist approaches to poverty alleviation, participation, benefit sharing and tenure all fall short of supporting rights, avoiding harms, and in many cases of producing positive social and ecological outcomes. Our review findings are in line with a transformation towards decolonised and justice centred forms of conservation (Büscher & Fletcher, 2019; Martin, 2017) and highlight ways in which the post-2020 biodiversity conservation strategies need to more explicitly and proactively integrate social equity, restorative justice, human rights, and appreciate the social-cultural contexts and political histories of PA sites. We note points of progress in addressing social equity concerns in the draft of the post-2020 global biodiversity framework (CBD, 2021), but the findings from our evidence synthesis also highlight significant gaps that continue to impede progress towards more equitable conservation that respects the rights of Indigenous Peoples and Local Communities in practice. Below we suggest how the 21 targets could be enhanced as well as interpreted and implemented at national and local levels (Table 2).

Our analysis was based on a relatively small number of papers and these were biased towards certain regions, and are certainly not representative of all PAs in the Global South. The studies also capture likely publishing bias against results of no impact. We counterbalanced this bias

693 through interviews with experts with a variety of perspectives and experiences relating to PAs
694 around the world including in the Americas. However, further research would be needed to
695 discern how the narratives may play out differently in Latin America which is underrepresented
696 in our study. Overall, our aim was to focus less on how common certain outcomes are but on
697 how the narratives are complicated by realities to provide insights into how the relationships
698 between PAs and wellbeing can be strengthened. We also recognise that there are other
699 narratives underpinning conservation practice. The five we selected were deemed to be common
700 and fundamental to interventions, but others are likely to exist, and likewise need to be critically
701 examined.

702 The simple assumption of N1 that 'conservation is pro-poor' can be mis-used to legitimise
703 exclusionary PAs and systems of governance that are too often harmful for the wellbeing of
704 communities. The pro-poor narrative is bolstered by the assumption that any costs to the poor
705 can be suitably compensated for (N3). The counter-claim found in our review is that if
706 conservation is to be genuinely pro-poor it will need to embrace a model that prevents harms
707 rather than seeking to compensate for them. Instead any human rights restriction arising from
708 PAs and subsequent compensation should be seen as a last resort. We also found N2 'poverty
709 reduction benefits conservation' to be a problematic narrative, in particular where this assumes
710 that efforts to support livelihoods will lead to conservation effectiveness.

711 There was more support for Narratives 4 and 5 on participation and secure tenure rights
712 respectively especially among our interviewees, pointing to the redistribution of power towards
713 communities as important for conservation success over improvements and compensation in
714 material poverty on their own. Although conservation can succeed in its ecological aims through
715 enforcement (Brockington, 2004) and participatory arrangements are far from being a panacea

716 (Adams & Hulme, 2001), the ethical basis for ensuring equity in conservation is well-accepted
717 (IUCN, 2005). Recent research outside our sample tends to confirm that participation by local
718 people can help to deliver both ecological and social objectives of PAs (Persha et al., 2011;
719 Andrade & Rhodes, 2012; Porter-Bolland et al., 2012; Oldekop et al., 2015; Dawson et al.,
720 2021). It is striking, however, that even in so-called participatory forms of governance and tenure
721 reform there is a tendency for elite capture and costs for the most marginalised. This highlights
722 the vital importance of meaningful participation that genuinely empowers people to effect
723 change through iterative and culturally appropriate processes, with benefits being distributed
724 equitably, and the recognition of customary tenure rights that give authority and control to
725 communities (Morgera, 2019).

726 Our review of evidence urges caution about the proposed expansion of PAs under the current
727 draft of the post-2020 framework. At a superficial level, the 21 draft targets (CBD 2021) appear
728 to cover the multiple dimensions of equity or justice (distribution of costs and benefits, decision
729 making procedures and recognition of values, knowledge systems and institutions), through
730 which the concerns of Indigenous Peoples, local communities and the poorest among them are
731 often articulated (Schreckenberg et al. 2016). The targets go slightly beyond previous principles
732 by stating that systems of customary sustainable use should be protected (Target 9), and that
733 communities, especially the most vulnerable, should receive equitable benefits from
734 conservation, including nutrition, food security, medicines, and livelihoods (Targets 9 and 13).
735 Equitable and effective participation in decision-making and free prior and informed consent are
736 explicitly targeted (Targets 13, 20 and 21), while respect for traditional knowledge and practices
737 (Targets 13 and 20) and rights over land, territories and resources, for Indigenous Peoples, local
738 communities as well as women, girls and youth (Target 21) appear to also be safeguarded (CBD

739 2021). Yet gaps remain between those principles and the nuanced issues highlighted through our
740 evidence review (see Table 2). In general, the targets highlight Indigenous Peoples and Local
741 Communities, women, youth and the vulnerable primarily as potentially impacted parties and a
742 group of actors to be considered stakeholders, whereas phrasing should more proactively endorse
743 their empowerment in PA governance and recognise the essential role their cultural values,
744 customary institutions and stewardship actions play in conservation. Proposed targets do
745 enshrine the importance of local community participation, yet ensuring the quality of
746 participation remains the challenge. Genuine and enforceable procedural standards are needed,
747 informed by the understanding that participation is an iterative process requiring time, resource,
748 mutual learning, trust-building and respect for local forms of knowledge and decision-making
749 (Morgera 2018).

750 To foster meaningful inclusion and empowerment, attention must be specifically directed to the
751 past experiences of displacement, disruption of knowledge systems and cultural practices, and
752 political marginalisation suffered by many through colonisation, market-driven development and
753 previous conservation interventions, which influence current relationships, expectations and the
754 implementation of any current or future conservation initiative (Lele et al. 2010). This has
755 profound implications for the processes required to build the requisite trust for inclusion of the
756 most vulnerable and marginalised, and to develop intercultural understanding for collaboration
757 between plural knowledge systems. Such processes may entail conflict resolution or restorative
758 justice approaches to attend to any historical and continuing effects on people's wellbeing, their
759 institutions, tenure security and rights, relationships and agency (Cooke and Kothari 2002, Noe
760 and Kangalawe 2015).

761 In reality, while principles of equity have been espoused in global environmental agreements for
762 at least 20 years (Borrini-Feyerabend et al. 2013), many national legal and political frameworks
763 simply do not support the rights, cultural practices and institutions or empowered political
764 influence of Indigenous Peoples and local communities, and consequently neither do many
765 conservation interventions (Martin 2017). This persistent barrier to equitable conservation in
766 practice means that the Global Biodiversity Framework must look beyond the principles
767 themselves to focus more attention to the way those social and governance standards are to be
768 implemented. Of importance here is the cursory reference under section J paragraph 18 to
769 "responsibility and transparency…… in implementation of the framework" (CBD 2021). The
770 approaches for ensuring rights of access and tenure, territorial integrity, and equitable and
771 effective participation have seldom been monitored, reported or reviewed at any level in the past,
772 resulting in an absence of accountability if social standards are not met (Zafra-Calvo et al. 2019).
773 These governance issues and the pathways to address them should be explicitly articulated.
774 Governance quality, particularly an emerging focus on equity and rights, is receiving increasing
775 attention within conservation policies (Borrini-Feyerabend et al., 2013), multi-stakeholder
776 processes (Zafra-Calvo et al., 2020) and assessment tools (Booker & Franks, 2019), with
777 potential to expose the flaws of conservation based on external assumptions about local
778 communities and promote more nuanced approaches.

779 Our research does not suggest that we should abandon attempts to link improvements in
780 biodiversity and human wellbeing, but highlights the need for certain governance qualities, such
781 as inclusiveness and adaptability. Dynamics for a given location fundamentally shape the
782 relationships posited in the narratives, undermining the application of any kind of blue-print
783 model for successful conservation and assumed synergies with local wellbeing, regardless of

784 context. Conservation policy and practice therefore needs to reorient towards theories of change
785 and types of governance more integrally structured around local knowledge and perspectives
786 (Díaz et al., 2015). At the same time, conservationists need to recognise that communities
787 invariably embody power dynamics allowing the well-placed to benefit from any intervention or
788 change at the expense of the less well-placed. Women in particular tend to lose out in
789 conservation processes, and gendered approaches to governance and impact evaluation are
790 needed (Agarwal 1997; Keane et al., 2016).

791 Evidence across all the narratives reviewed highlights the importance of understanding wellbeing
792 from the ground up rather than assuming people's priorities and motivations (Biedenweg &
793 Gross-Camp, 2018). This understanding must go beyond material dimensions to account for
794 aspects of people's lives that they value, and extend to ideas of justice, culturally specific
795 relations with nature, customary tenure regimes and livelihoods. The evidence suggests that
796 despite qualitative data on perceptions often being dismissed as 'unscientific' in the conservation
797 literature (Bennett, 2016), understanding local values and viewpoints such as perceived tenure
798 security is vital in creating synergies between ecological and social outcomes. All too often,
799 impact assessments of conservation focus on financial and material outcomes to the exclusion of
800 social and cultural impacts (Blundo-Canto et al. 2018). Lack of attention to local values partly
801 explains unfulfilled expectations, poor motivation and lack of local legitimacy, a thread running
802 through the evidence base. For example, compensation should include consideration of
803 immaterial damage affecting Indigenous Peoples and Local Communities' subsistence and
804 spiritual connection with their territory (Ankowiak, 2014).

805 The packaging of PAs as win-wins for biodiversity and human wellbeing downplays the
806 inevitable trade-offs that occur in conservation and highlighted by our review between social and

807 ecological outcomes, aspects of wellbeing, groups of people and different scales (Woodhouse et
808 al., 2018). Acknowledgement of trade-offs supports more realistic acceptance of losses and
809 opens up negotiation over choices and novel ideas about what success means and how to reduce
810 or eliminate trade-offs, or what may not be appropriate to 'trade-off' (Galafassi et al., 2017;
811 McShane et al., 2011). In achieving the proposal to integrate biodiversity values into planning
812 and development processes, governance structures must allow local participation in deliberations
813 over wellbeing priorities, how they may link to biodiversity and the ecological realm, with
814 recognition given to place-based knowledge about nature (McCarter et al., 2018).

815 Our review also highlights the value of taking a broader perspective beyond the boundaries of
816 PAs, local communities, and the present. Broader structural issues such as non-local resource
817 demand and government policies are often the underlying cause of overexploitation of resources,
818 poverty, and changes in local management institutions and values (Lenzen et al., 2012; Perfecto
819 & Vandermeer, 2005). Perhaps because of the difficulties of challenging these issues,
820 conservationists have long focused on local 'threats' and individual agency (Duffy et al., 2016).
821 Social justice approaches make imperative the need to shape broader drivers, requiring political
822 engagement at multiple scales of governance on longer timescales. For example historical
823 injustices and land tenure policies that create insecurity must be redressed to build trust in
824 current projects. Likewise, people's priorities and conceptions of wellbeing will change within
825 dynamic systems that shape people's needs and desires, necessitating both adaptive governance
826 systems and attention to the shifting broader socio-economic and political factors that may
827 influence unsustainable practices.

828 The conservation community have increasingly acknowledged the importance of considering
829 local peoples' experiences of and agency in conservation. But current proposals for meeting

ambitious targets for protection post-2020 (e.g. Dinerstein et al., 2019; Waldron et al., 2020) need greater clarity on key issues such as governance qualities and how costs to local communities should ideally be mitigated, if unavoidable. The focus within global biodiversity policy debates on what proportion of the earth to conserve, rather than how it is to be conserved, threatens to downplay the importance of addressing deficiencies in governance and equity outcomes from existing PAs as well as the broader drivers of unsustainable resource extraction. Our review suggests that future approaches should draw upon just and democratic forms of conservation that put local actors at the centre of decision-making and recognise their rights to land and resources and ensure conservation actors are accountable for upholding governance and equity standards. However, the lessons from 15 years of literature exploring the relationships between local people and protected areas and the experiences of practitioners highlights the complex building of collaboration and progressive political change this requires.

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Author Contributions

All authors contributed to the conception of this paper. CB and PB carried out the literature search and review; CB, EW, KH, ND, AM, JPGJ carried out the expert interviews; EW led the drafting of the paper; ND, AM, CB and PB wrote sections of the narrative review. All authors critically reviewed drafts of the paper and gave final approval for publication

Data availability statement

Extracted data from the reviewed papers are available here: https://doi.org/10.5522/04/17153291

Conflict of interest

The authors declare no conflicts of interest.

Ethics Approval

Ethical approval was granted by the Departmental Research Ethics Committee of University College London's Anthropology Department.

Consent for Publication

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Narrative shorthand	Summary of evidence for the narrative
N1: Conservation is pro-poor	PAs can contribute to basic human needs and material poverty alleviation, but this is dependent on access. Due to exclusion, the poor commonly experience costs from PAs. Where multiple dimensions of wellbeing are included in studies, there are trade-offs and complexities in outcomes.
N2: Poverty reduction benefits conservation	For improvements in wellbeing to benefit conservation, promoted changes must be suited to local values, linked to biodiversity and inclusive. Promotion of alternative livelihoods often leads to unintended negative social and ecological outcomes.
N3: Compensation neutralises costs of conservation	Material compensation is less relevant for supporting positive conservation outcomes than recognition of local social and cultural practices, and decision-making influence. Compensation schemes are also often hampered by low transparency and unequal impacts.
N4: Local participation is good for conservation	Meaningful participation, or more broadly the quality of governance, and extent of rights and control afforded to local communities, influence their motivation and capacity to conserve. Consultative participation or weak inclusion of marginalised groups hinders conservation.
N5: Secure tenure rights support effective conservation	Secure tenure rights can empower local communities to effectively conserve, but crucially this entails respect for customary and communal access systems. Conservation governance that only recognises formal property rights or causes tenure insecurity produces unequal impacts and weak local legitimacy.

Table 1: Summary of evidence on the narratives

Narrative shorthand	Implication of the review for conservation practice and the application of post-2020 CBD targets	Related goals and targets in draft post-2020 Global Biodiversity Framework (CBD 2021)
N1: Conservation is pro-poor	• The full range of material and non-material costs and benefits PAs can have for local communities should be explicitly acknowledged, identified, assessed and addressed for conservation governance of any form • Ensure rights of access to local communities for sustainable resource use and cultural practices (see also narrative 5) • Proactive measures to ensure the poor and marginalised are represented and access benefits (e.g. redistribution of tourism income) • Restorative justice approaches to agree appropriate ways to redress historical and continuing harms	• Ensure benefits, especially for the most vulnerable • Integrate biodiversity into poverty reduction strategies • Respect rights of IPLCs over resources
N2: Poverty reduction benefits conservation	• Poverty reduction strategies must consider local definitions of poverty and deprivation beyond income • Role of biodiversity in subsistence and meeting basic needs to be valued and safeguarded • Any benefits should be culturally appropriate • Interventions and programmes should aim to support local institutions and practices, not replace them	• Ensure benefits, especially for the most vulnerable • Sustainable management of production systems • Benefit sharing from traditional knowledge • Integrate biodiversity into poverty reduction strategies • Ensure traditional knowledge guides decision-making
N3: Compensation neutralises costs of conservation	• Harms should be a last resort due to difficulties in making compensation fair or commensurate in practice • Where harms are unavoidable, ensure compensation attends to non-material and cultural losses as well as economic losses • Compensation schemes require equitable governance in the long-term, as benefits achieve little without empowerment and respect for local knowledge and institutions • Specific attention to the poorest, most marginal groups including women because elite capture should be expected	• Ensure benefits, especially for the most vulnerable • Benefit sharing • Reform harmful incentives
N4: Local participation is good for conservation	• Focus on the extent and quality of participation (or of governance more broadly) rather than its occurrence • Establish and uphold standards for the continual influence and control of local communities, from design stages, and a central role for local knowledge and institutions in governance • Decision making through locally legitimate authority, maximising inclusion especially for women • Establish relationships, trust between communities and non-local organisations, through conflict resolution as precursor to decision-making where necessary	• Ensure traditional knowledge guides decision-making • Equitable participation in decision-making • Integrate biodiversity into poverty reduction strategies
N5: Secure tenure rights support effective conservation	• Define tenure to include customary and communal aspects, beyond individual, legal property rights • All signatory nations to CBD and authorities for any conservation programme should report on the assessment and inclusion of Indigenous Peoples and Local Communities' communal and customary tenure systems. • Establishment of new PAs or restoration programmes should build upon local traditional knowledge and institutions, and legitimise and support local tenure systems • Particular attention required to include the poor and marginalised social groups for whom land and resource access can be temporary, rented and undocumented tenancy	• Targets for restoration and PA area extent • Ensure benefits, especially for the most vulnerable • Sustainable management of production systems • Nature-based solutions • Integrate biodiversity into poverty reduction strategies • Reform harmful incentives • Ensure traditional knowledge guides decision-making • Respect rights of IPLCs over resources

Table 2 Implications of the narrative evidence review on the application of the post-2020 global biodiversity framework

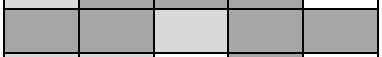
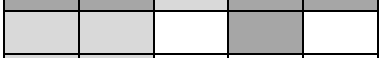
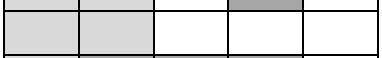
Supporting Information

Conservation Organisations

Evidence for narratives on conservation organisation websites (January 2018)

* organisation operates internationally outside of Africa

Organisation	Narrative				
	1	2	3	4	5
A Rocha*					
Africa Conservation Fund UK					
African Conservation Centre					
African Ele-Fund					
African Fund for Endangered Wildlife					
African Mangrove Network (AMN)					
African Parks Foundation					
African Wildlife Foundation					
Amara Conservation					
Ambassadors for Wildlife through Education (AWE)					
Amboseli Community Wildlife Tourism Project (ACWTP)					
Amboseli Trust for Elephants					
Ape Action Africa					
Arboretum D'Antsokay					
ARCOS - Albertine Rift Conservation Society.					
Association 'Les Amis des Oiseaux' (AAO)					
Association pour la Conservation de la Nature au Rwanda					
Biodiversity Foundation for Africa (BFA)					
BirdLife Botswana (BLB)					
Birdlife International (Secretariat)*					
BirdLife Zimbabwe (BLZ)					
Bonobo Conservation Initiative (BCI)					
Born Free Foundation*					
Bushmeat Project					
Cameroon Environmental Watch					
Caracal					
CERCOPAN					
Cheetah Conservation Botswana					
Cheetah Conservation Fund					
Chobe Wildlife Trust					
Conservation International*					
Conservation Society of Sierra Leone (CSSL)					

Conservation South Luangwa	
Conservation through Poverty Alleviation	
Conserve Africa	
David Sheldrick Wildlife Trust	
David Shepherd Wildlife Foundation*	
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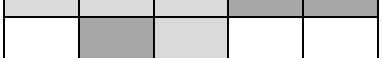
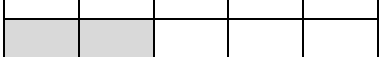
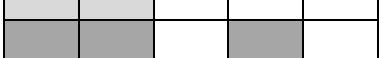
Durrell Wildlife Conservation Trust*	
Earthwatch Institute*	
East African Wild Life Society	
Elephant Pepper Development Trust	
Elephant Voices	
Endangered Wildlife Trust (EWT)	
Environmental Foundation for Africa, Sierra Leone	
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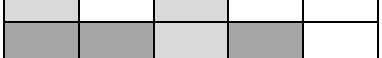
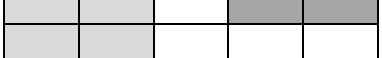
Fanamby	
Fauna and Flora International*	
Fondation Pour les Aires Protegées at la Biodiversite de Madagascar	
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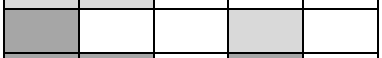
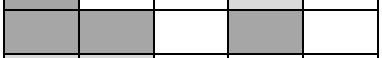
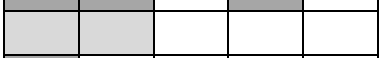
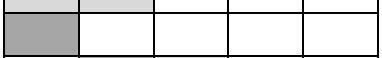
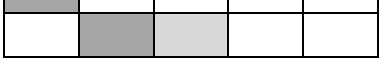
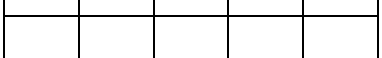
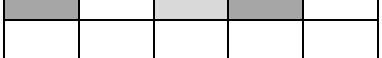
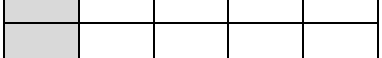
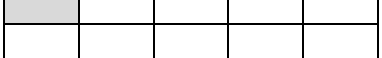
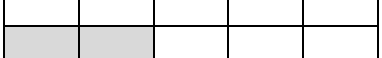
Frankfurt Zoological Society*	
Friedkin Conservation Fund	
Friends of Conservation (UK)	
Friends of Conservation (USA)	
Friends of Elephant/Vrienden van de Olifant	
Friends of the Hippo and The Turgwe Hippo Trust	
Gallmann Memorial Foundation (GMF)	
George Adamson Wildlife Preservation Trust	
Ghana Wildlife Society (GWS)	
GORILLA Association	
Gorilla Organization	
Grassland Society of Southern Africa	
H.E.L.P. Congo	
Humane Society International*	
Hurghada Environmental Protection & Conservation Association	
International Elephant Foundation*	
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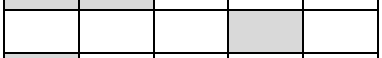
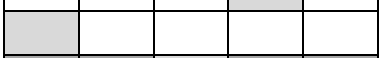
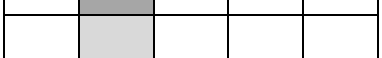
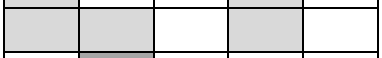
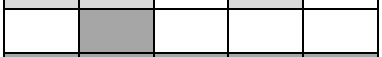
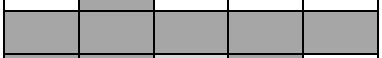
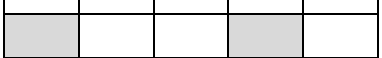
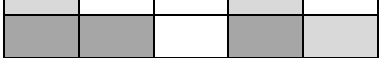
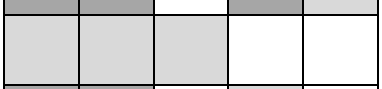
Jane Goodall Institute	
Kasanka Trust	
Kenya Wildlife Trust	
Kilimanjaro Environmental Conservation Management Trust Fund	
Kipepeo Butterfly Project	

Laikipia Wildlife Forum	
Last Great Ape Organization	
Lewa Wildlife Conservancy	
Lion Conservation Fund	
Living with Lions	
Lukuru Wildlife Research Project (LWRP)	
Maasai Foundation of East Africa	
Madagascar Fauna Group	
Madagascar Wildlife Conservation	
Man And the Environment (MATE)	
Mokolodi Wildlife Foundation	
Mount Kenya Wildlife Conservancy	
Mpala Wildlife Foundation	
Naturama	
Nature Djibouti	
Nature Kenya: The East Africa Natural History Society	
Nature Seychelles	
NatureUganda (NU)	
Nigerian Conservation Foundation (NCF)	
Nigerian Montane Forests Project	
Noé Conservation	
Northern Rangelands Trust	
Nouvelles Approches (now Biodiversité au Katanga)	
Organização para a Defesa e Desenvolvimento das Zonas Húmidas	
Owens Foundation for Wildlife Conservation	
Painted Dog Conservation Trust	
Pan African Sanctuary Alliance (PASA)	
Pandrillus	
Partners in Conservation	
Peace Parks Foundation	
Peregrine Fund*	
Predator Conservation Trust	
Project Primate	
Prowildlife	
Rainforest Action Network (RAN)*	
Rainforest Foundation*	
Rare Species Conservatory Foundation*	
Rhino Ark	
Robin Hurt Wildlife Foundation	
RSPB International*	
Safari Club International Foundation*	

Sahara Conservation Fund	
Save My Future Foundation (SAMFU)	
Save The Elephants (STE)*	
Save the Rhino International*	
Save the Rhino Trust	
Save the Species Worldwide Foundation*	
Sebakwe Black Rhino Trust	
SEED Madagascar	
Somali Environmental Protection and Anti-Desertification Organisation	
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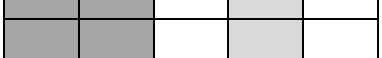
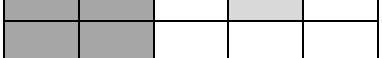
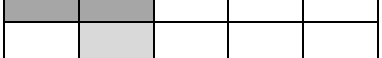
Space for Elephants	
System of Protected Areas of Madagascar (SPAM)	
Tandroy Conservation Trust	
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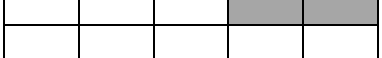
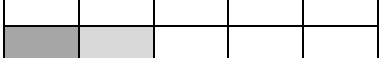
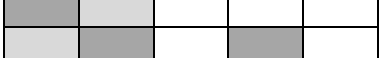
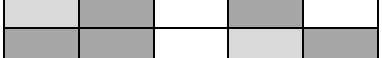
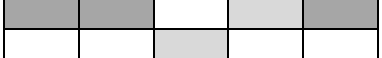
Tanzania Natural Resources Forum	
The Colobus Trust	
The International Crane Foundation*	
The Kesho Trust	
The Rainforest Foundation Fund Inc (Norway)	
The Wasmoeth Wildlife Foundation	
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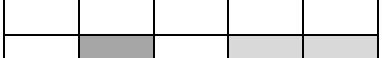
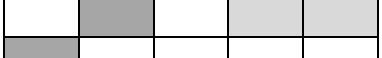
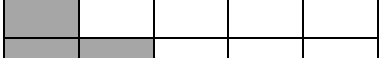
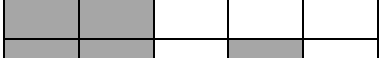
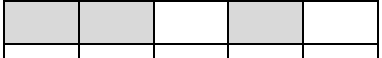
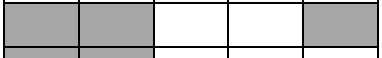
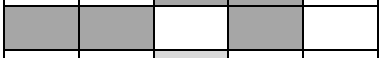
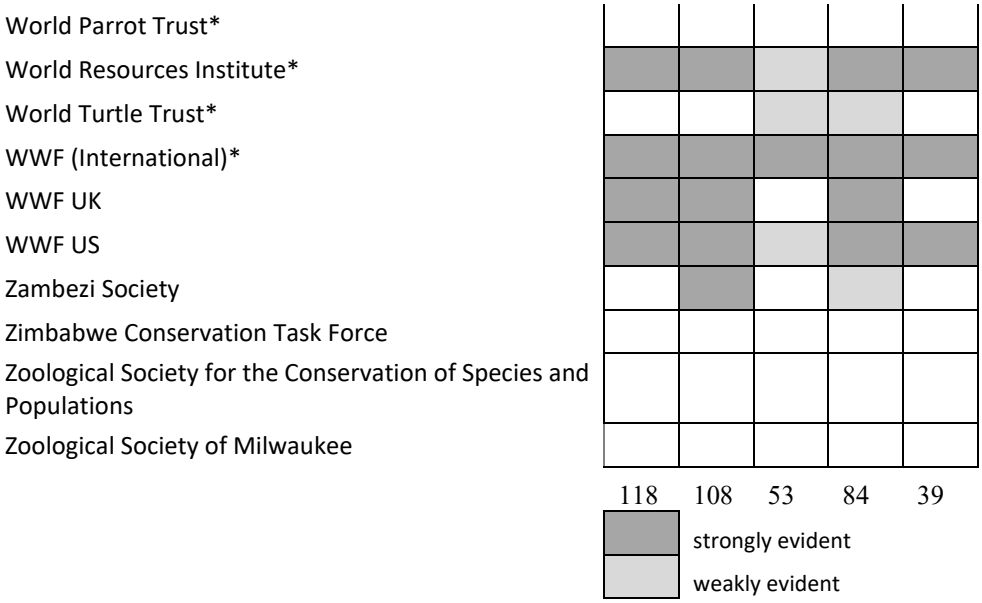
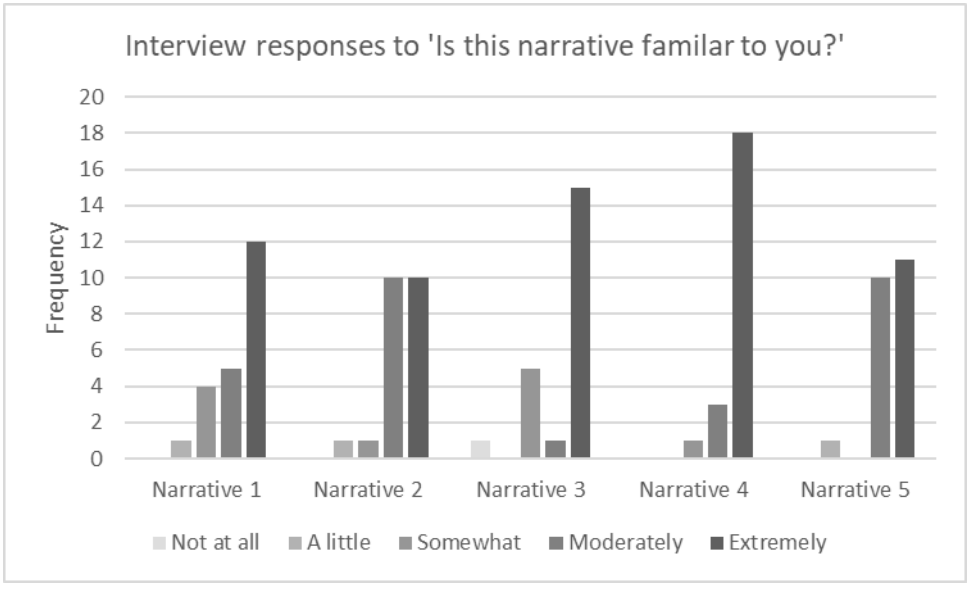
TUSK Trust	
Uganda Conservation Foundation	
West African Primate Conservation Action (WAPCA)	
West African Bird Studies Association (WABSA)	
West Lunga Trust	
Westerveld Conservation Trust	
Wetlands International*	
Wild Chimpanzee Foundation	
WILD Foundation*	
Wilderness Trust of Southern Africa	
Wildlife Action Group Malawi	
Wildlife and Environment Society of Malawi	
Wildlife Conservation Foundation of Tanzania	
Wildlife Conservation Society (WCS)*	
Wildlife Conservation Society of Tanzania (WCST)	
Wildlife Direct	
Wildlife Now	
Wildlife Warriors Worldwide*	
WildTrack*	
William Holden Wildlife Foundation	



Interview validation



World Bank Economies

(March 2017)

Country	World Bank Economic category	Region (United Nations geoscheme)
Afghanistan	Low income	Asia
Armenia	Lower middle income	Asia
Bangladesh	Lower middle income	Asia
Benin	Low income	Africa
Bhutan	Lower middle income	Asia
Bolivia	Lower middle income	Americas
Burkina Faso	Low income	Africa
Burundi	Low income	Africa
Cabo Verde	Lower middle income	Africa
Cambodia	Lower middle income	Asia
Cameroon	Lower middle income	Africa
Central African Republic	Low income	Africa
Chad	Low income	Africa
Comoros	Low income	Africa
Congo, Dem. Rep.	Low income	Africa
Congo, Rep.	Lower middle income	Africa
Côte d'Ivoire	Lower middle income	Africa
Djibouti	Lower middle income	Africa
Egypt, Arab Rep.	Lower middle income	Africa
El Salvador	Lower middle income	Americas
Eritrea	Low income	Africa
Ethiopia	Low income	Africa
Gambia, The	Low income	Africa
Ghana	Lower middle income	Africa
Guatemala	Lower middle income	Americas
Guinea	Low income	Africa
Guinea-Bissau	Low income	Africa
Haiti	Low income	Americas
Honduras	Lower middle income	Americas
India	Lower middle income	Asia
Indonesia	Lower middle income	Asia
Kenya	Lower middle income	Africa
Kiribati	Lower middle income	Oceania
Korea, Dem. People's Rep.	Low income	Asia
Kosovo	Lower middle income	Europe
Kyrgyz Republic	Lower middle income	Asia
Lao PDR	Lower middle income	Asia
Lesotho	Lower middle income	Africa
Liberia	Low income	Africa
Madagascar	Low income	Africa
Malawi	Low income	Africa
Mali	Low income	Africa
Mauritania	Lower middle income	Africa
Micronesia, Fed. Sts.	Lower middle income	Oceania
Moldova	Lower middle income	Europe
Mongolia	Lower middle income	Asia
Morocco	Lower middle income	Africa
Mozambique	Low income	Africa

Myanmar	Lower middle income	Asia
Nepal	Low income	Asia
Nicaragua	Lower middle income	Americas
Niger	Low income	Africa
Nigeria	Lower middle income	Africa
Pakistan	Lower middle income	Asia
Papua New Guinea	Lower middle income	Oceania
Philippines	Lower middle income	Asia
Rwanda	Low income	Africa
Samoa	Lower middle income	Oceania
São Tomé and Principe	Lower middle income	Africa
Senegal	Low income	Africa
Sierra Leone	Low income	Africa
Solomon Islands	Lower middle income	Oceania
Somalia	Low income	Africa
South Sudan	Low income	Africa
Sri Lanka	Lower middle income	Asia
Sudan	Lower middle income	Africa
Swaziland	Lower middle income	Africa
Syrian Arab Republic	Lower middle income	Asia
Tajikistan	Lower middle income	Asia
Tanzania	Low income	Africa
Timor-Leste	Lower middle income	Asia
Togo	Low income	Africa
Tonga	Lower middle income	Oceania
Tunisia	Lower middle income	Africa
Uganda	Low income	Africa
Ukraine	Lower middle income	Europe
Uzbekistan	Lower middle income	Asia
Vanuatu	Lower middle income	Oceania
Vietnam	Lower middle income	Asia
West Bank and Gaza	Lower middle income	Asia
Yemen, Rep.	Lower middle income	Asia
Zambia	Lower middle income	Africa
Zimbabwe	Low income	Africa

Exclusion Criteria

Exclude on date: The study has a publication date before 2014

Exclude on country: The study is outside of the list of included countries for the IMPACTS project, which focuses on low and lower middle income countries only (according to the World Bank).

Exclude on Population: The subjects of the intervention are not discrete individuals, households, communities or national states.

Exclude on intervention: The study does not include the establishment or management of an area based protected or conserved area intervention or associated policy or programme.

Exclude on outcome: The study does not observe, measure or describe human wellbeing indicators, outcomes, or impacts. The study only focuses on biophysical outcomes of conservation or solely examines how status or trends in human wellbeing affect conservation outcomes.

Exclude on study type: The study is a theoretical or conceptual article, modelling study, commentary, editorial or narrative review.

Search Terms

Protected area intervention terms
protected area* OR nature reserve* OR wilderness area* OR national park* OR natural monument* OR natural feature* OR management area* OR world heritage site* OR biosphere reserve* OR biodiversity conservation OR national reserve* OR conservanc* OR ecotourism OR corridor* OR community-based conservation OR payment for ecosystem services OR PES AND

Intervention adjacent terms
marine OR freshwater OR coastal OR forest* OR ecosystem* OR species OR habitat* OR biodiversity OR sustainab* OR ecolog* OR integrated OR landscape OR seascape OR coral reef* OR natural resource* AND

Outcome terms
wellbeing OR well-being OR well being OR ecosystem service* OR nutrition OR skill* OR empower* OR clean water OR livelihood* OR (food) security OR resilience* OR vulnerability OR (social) capital OR attitude* OR perception* OR (human) health* OR human capital OR (traditional knowledge or TEK) AND

Outcome adjacent terms
human* OR people OR person* OR community* OR household* OR fisher* OR collaborative

Codebook

Bibliographic info	Author/s	
	Year	
	Type of Biome	Terrestrial, Marine
	Title	
	Affiliations of authors	Academic, Independent (no affiliation), PA management, Public Sector, Private Sector, Research Institute
Protected area	Name of protected area	
	IUCN Protected Area Category	Ia strict nature reserve; Ib wilderness area; II National Park; III Natural monument/feature; IV habitat/species management area; V protected landscape/seascape; VI protected area with sustainable use; buffer/transition zone; biosphere reserve; ICCA (not covered by IUCN); private (not covered by IUCN); other - specify e.g. de facto, voluntary conservation; Not reported
	Governance type/implementer	government, shared (diverse stakeholders), private, indigenous or local communities, not specified
	Country of PA	
	Year established (if stated)	
Study info	Year of study (if stated)	
	Data source	Primary, Secondary
	Unit of analysis	individual, household, village, country
	Data type	Quantitative, Qualitative, Mixed
	Includes subjective measures	Y/N
	Outcomes reported on	Social, Social & Environmental
	Evidence of process	Outcomes reported only, Process & outcomes reported, Other
	Aspect of PA studied	establishment (presence/absence), management activities, governance processes, Indirect (e.g. tourism or PES)
Outcomes	Social outcome/s reported	income, other material (food, assets, livelihoods, access to services), health, security, social relations/conflict, agency/empowerment/participation, cultural values/practices, subjective (overall e.g. how's life?; or satisfaction with specific aspects of wellbeing)
	Details of main outcomes covered	
	Wellbeing explicitly mentioned	Y/N
	Equity/distributional aspects of outcomes [Differential outcomes reported]	Y/N

	Equity/distributional aspects of outcomes [Equity explicitly mentioned]	Y/N
	Environmental outcomes or behaviours included [Environmental outcomes (eg biodiversity)]	Y/N
	Environmental outcomes or behaviours included [Environmental behaviours (eg fishing, hunting)]	Y/N
	Environmental outcomes linked to social outcomes or processes	Y/N
	Ecosystem services specified	None, supporting, provisioning, regulation, cultural
	Positive or negative social impacts	Positive, Negative, Mixed, Not explicit
Narratives	1. Conservation is pro-poor [Link to narrative]	Yes, No, Partially
	1. Conservation is pro-poor [Supportive of narrative]	Yes, No, Partially
	1. Pro-poor narrative Notes	
	2. Poverty reduction benefits conservation narrative [Link to narrative]	Yes, No, Partially
	2. Poverty reduction benefits conservation narrative [Supportive of narrative]	Yes, No, Partially
	2. Poverty reduction narrative Notes	
	3. Compensation neutralises conservation costs [Link to narrative]	Yes, No, Partially
	3. Compensation neutralises conservation costs [Supportive of narrative]	Yes, No, Partially
	3. Compensation narrative Notes	
	4. Participation is good for conservation [Link to narrative]	Yes, No, Partially
	4. Participation is good for conservation [Supportive of narrative]	Yes, No, Partially
	4. Participation narrative Notes	
	5. Resource tenure underpins long-term conservation [Link to narrative]	Yes, No, Partially

	5. Resource tenure underpins long-term conservation [Supportive of narrative]	Yes, No, Partially
	5. Resource tenure narrative Notes	

Non-academic interviewees

Type of organisation	**Based in**	**Region/country specialism**
Conservation membership organisation	Kenya	Kenya
Country office of International conservation NGO	Laos	Lao
Country office of International conservation NGO	Nepal	Nepal
Country office of International conservation NGO	Pakistan	Pakistan
Government conservation Agency	Uganda	Uganda
Government research institute	Kenya	Kenya
Grassroots development NGO	Kenya	Kenya
In-country conservation NGO	Madagascar	Madagascar
In-country conservation NGO	Brazil	Brazil
Intergovernmental organisation	Italy	Oceania
International conservation NGO	USA	Central Africa, Latin America and Asia
International conservation NGO	USA	Nepal, East and Southern Africa
International conservation NGO	USA	Colombia, Peru, Madagascar
International conservation policy organisation	UK	Africa
International development organisation	Netherlands	Latin America
NGO focused on indigenous rights	across Africa	South Africa
Research organisation on environment & development	UK	East Africa, West Africa

Interview Questions

Please consider the following context and the widespread assumptions that follow. We would then like to ask about your experience, and your opinion on those assumptions, through a set of structured questions.

STUDY CONTEXT

- We are interested in understanding the processes involved in positive and negative social impacts of PAs on human wellbeing, how impacts may differ between groups e.g. according to gender and age, and how relationships between social and environmental outcomes may vary with context such as with governance type, economic and social factors.

- We are interested in impacts on *multi-dimensional* human wellbeing and equity. Therefore, please consider the following aspects:
  - Material wellbeing including assets, income, food, livelihoods and subsistence activities
  - Health
  - Security – confidence in the future
  - Social relations e.g. within the community and between communities and PA authorities
  - Agency, empowerment and participation
  - Recognition of and impacts on cultural values and practices
  - Subjective wellbeing – how people *feel* about change

- By 'protected areas', we mean all kinds of protected and conserved areas in marine and terrestrial habitats. This includes the six IUCN Protected Area management categories, plus other effective area-based conservation measures, such as other types of indigenous, community and privately conserved areas; and areas that provide connectivity between designated protected areas. We are interested in the establishment, management processes and activities associated with these areas.

- Our focus is on PAs and communities in low and lower middle income countries (according to the World Bank), the countries that are the target of ESPA work.

We are structuring the analysis by investigating five key narratives in the data, which we have identified as underlying PA establishment and management actions. We are interested in whether these assumptions hold in real-life situations.

NARRATIVES

1. Ecosystem services narrative

Because poor people are disproportionately dependent on ecosystem services, protected areas that target those services will be pro-poor

This narrative sees protected areas (PAs) as a tool to reduce poverty. It is often the poorest people who are most dependent on ecosystems for their livelihoods and food security. By protecting these ecosystem services, PAs are thus important for delivering poverty reduction objectives by supporting a range of economic activities such as forestry, fisheries, agriculture and tourism as well as providing access to clean water and energy.

2. Poverty and conservation narrative

Because poor people are disproportionately dependent on ecosystem services, improving their material wellbeing will reduce pressure on protected areas

This narrative sees poverty reduction as a means to achieve PA conservation. This can occur through strategies such as alternative livelihoods, revenue sharing, investment in infrastructure and tourism, which are implemented to reduce reliance on natural resources and behaviours that might be environmentally damaging. The economic benefits generated by these strategies also increase local support for conservation. Incentive schemes such as payments for ecosystem services (PES) that provide benefits to poor people are directly linked to PA conservation objectives, thus enhancing conservation success.

3. Compensation narrative

Unavoidable social costs of protected areas for poor people can be neutralised by providing appropriate compensation

Because poor people endure the costs of PAs, such as due to human-wildlife conflict (crop-raiding, livestock predation) or reduced access to PA resources for food, fuel or livelihoods, compensation schemes offset these costs and create more positive attitudes towards PAs.

4. Participation narrative

Participation in protected area governance is seen by communities as a positive social benefit and it is a route to effective conservation

This narrative sees participation of local people in PA decision-making and recognition of their values and interests as important factors contributing to long-term conservation success. Participation is valued by communities and increases the legitimacy of the PA and its policies. Participation increases communities' sense of stewardship over PAs, builds capacity and creates greater incentives to harvest resources sustainably to ensure future access to benefits.

5. Secure tenure narrative

Secure land and resource tenure underpins improved conservation outcomes (social and ecological) in and around protected areas

This assumes that tenure insecurity is the cause of resource degradation. Secure land rights enable poor people to invest in resources and strategies that promotes resilient livelihoods. It is also the foundation for the sustainable use of resources that supports long-term conservation outcomes.

We would like to ask you the following questions, and for you to share your thoughts based on your own experiences through your work on ESPA projects or other similar projects or research.

Overall:

1) From your ESPA project/other professional experience, can you give examples of a) positive and b) negative social impacts of PAs on the wellbeing of local people? Can you explain why these might have occurred? Where they have been negative? What has been done to reduce them?

2) From your own experience, what are the *synergies* you've found in PA conservation (i.e. different outcomes interact to improve the overall outcome) a) between social and ecological outcomes, and b) between different social outcomes? Can you give examples of each from your work?

3) What do you see as some of the critical trade-offs in protected area conservation, a) between social and ecological outcomes, and b) between different social outcomes? Can you give examples of each from your work? Are there difficult decisions that you've had to made, or you have seen other make, in regard to these trade-offs, and how they have been resolved?

Protected Area narratives

For each of the narratives above can you /answer the following:

1) Is this assumption familiar to you? (circle as appropriate)

Not at all	A little	Somewhat	Moderately	Extremely

2) Where have you come across the idea?

3) Do you think the assumption has changed through time? How?

4) From your experience do you agree that the assumption is valid? (circle as appropriate)

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

5) If at all valid, can you provide examples? Where? In what kinds of protected area? For whom?

6) If you do not think it is completely valid in what ways or in which contexts do you think it is not valid? Where and for whom? Please refer to specific examples such as case studies or papers.

7) Do you have an additional narrative or idea that you think guides protected area management?