






CONTRIBUTED PAPER

Evaluating and reflecting on coproduction of protected area management plans

Dirk J. Roux^{1,2}  | Jeanne L. Nel^{2,3}  | Stefanie Freitag¹  | Peter Novellie²  |
Eureta Rosenberg⁴ 

¹Scientific Services, South African National Parks, George, South Africa

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

³Wageningen Environmental Research, Wageningen University, Wageningen, The Netherlands

⁴Environmental Learning Research Centre, Rhodes University, Grahamstown, South Africa

Correspondence

Dirk J. Roux, Scientific Services, South African National Parks, George, South Africa.

Email: dirk.roux@sanparks.org

ABSTRACT

Protected areas are complex social-ecological systems, hence their management should be guided by engagement and co-learning with diverse stakeholders. The challenge of effective stakeholder participation has generated a body of literature on the design and facilitation of coproduction processes. In this study, we used this literature to develop a principle-based framework for assessing coproduction. We then applied this framework to evaluate how well “adaptive planning” (a sub-process of adaptive management used for visioning and objective setting with stakeholders), as applied to the Garden Route National Park in South Africa, aligned with the ideals of coproduction. Our analysis revealed shortcomings in the adaptive planning process, which could be improved through broadening the agenda beyond the mandate and control of national parks, empowering collective agency among a wider stakeholder network, and embedding co-learning with stakeholders as an ongoing journey. A significant finding was that adaptive management does not align well with the ideals of coproduction, which may be better supported by an adaptive co-management approach. The latter is particularly necessary in complex national parks that are diverse in terms of both ecosystems and stakeholders, and where governance may be contested.

KEYWORDS

assessment framework, case study, coproduction, Garden Route National Park, open-access parks, protected area management, stakeholder engagement, strategic adaptive management

1 | INTRODUCTION

Protected areas are social-ecological systems, with interactions and feedbacks between system components and across scales giving rise to complex and dynamic conservation issues (Cumming, 2016; De Vos, Cumming, & Roux, 2017; Palomo et al., 2014). Such issues are typically

contestable, uncertain, and affect multiple stakeholders. Addressing complex social-ecological issues requires participative, integrative, equitable, and adaptive approaches, allowing for engagement and co-learning with diverse stakeholders, and integration of knowledge across academic disciplines and science-practice realms (DeFries & Nagendra, 2017; Reed, 2008; Sayer et al., 2013). As such,

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the active and meaningful involvement of stakeholders in protected area decision-making processes is essential to conservation success (López-Rodríguez et al., 2020).

In recent decades a number of research as well as management approaches have evolved to facilitate participatory processes and knowledge integration, including postnormal science (Ravetz, 2006), transdisciplinary research (Lang et al., 2012), and adaptive management (Lee, 1999). These approaches overlap in their aim to facilitate co-learning among stakeholders from science and practice, achieve an enriched and collective understanding among these stakeholders of a particular social-ecological issue, and co-produce knowledge to serve a common purpose.

Stakeholder participation is a central theme of these approaches, referring to “a process where individuals, groups, and organizations choose to take an active role in making decisions that affect them” (Reed, 2008). Such processes have the potential to “reduce conflict, build trust, and facilitate learning among stakeholders..., who are then more likely to support project goals and implement decisions in the long term” (Reed et al., 2018). Several typologies of participation have been proposed for different goals and contexts (see Reed, 2008 for a review). Increasing focus has also been given to ensuring that stakeholders participate on equal footing, paying attention to including both powerful and more marginalized perspectives (Miller & Wyborn, 2020; Norström et al., 2020). A recent typology proposes four modes of engagement: top-down one-way communication and/or consultation; top-down deliberation and/or coproduction, bottom-up one-way communication and/or consultation; and bottom-up deliberation and or coproduction (Reed et al., 2018). Here our interest is primarily in the modes with coproduction potential, which is increasingly viewed as a desirable outcome of participative approaches that bring together diverse stakeholder perspectives (see review by Wyborn et al., 2019).

The literature on coproduction has co-evolved and complements that of various participatory processes in environmental research and management. With roots in three academic fields (public administration, science and technology studies, and sustainability science), coproduction refers broadly to processes of bringing together people/actors with diverse backgrounds (e.g., scientists, decision makers, and other stakeholders) to jointly produce context-specific products, services and/or knowledge that relate to an issue of shared concern and promote sustainable pathways (Miller & Wyborn, 2020; Norström et al., 2020; Wyborn et al., 2019). The term “knowledge coproduction” has become a popular term in peer-reviewed literature, however we agree with Miller and Wyborn (2020) that the focus on knowledge specifically is somewhat limiting, and therefore simply use “coproduction” hereafter. Broadening the

scope beyond knowledge reflects other processes among stakeholders, such as trust and co-learning, institution building, and addressing political-economic structures that may constrain the agency of stakeholders. Various lessons (Miller & Wyborn, 2020), guidelines (Wyborn et al., 2019), and principles (Norström et al., 2020; O'Connor et al., 2019) have been proposed to inform the design and facilitation of coproduction processes. Potential pitfalls have been highlighted (e.g., the time and resource costs may outweigh perceived benefits), along with future research gaps (e.g., to better understand the institutionalization of coproduction; Steen, Brandsen, & Verschuere, 2018; Wyborn et al., 2019).

While coproduction is an implied aim of transdisciplinary research approaches (Roux, Nel, Cundill, O'Farrell, & Fabricius, 2017) and postnormal science (Bremer et al., 2018), the coproduction potential of adaptive management remains poorly understood. First gaining prominence in the 1970s and 1980s (Holling, 1978; Walters, 1986; Walters & Hilborn, 1978), adaptive management aims to improve decision making over time. It links well-defined objectives with purposeful experimentation and monitoring, evaluation of results, defensible adaptations, and reiteration of the process (Allen, Fontaine, Pope, & Garmestani, 2011; Gregory, Ohlson, & Arvai, 2006; Rist, Felton, Samuelsson, Sandström, & Rosvall, 2013; Westgate, Likens, & Lindenmayer, 2013). Collaboration and co-learning between scientists and managers has always been an implicit condition of adaptive management, and from its earliest formulation the participation of stakeholders was viewed as a useful means to manage conflict and increase the pool of knowledge contributions and potential management solutions (Holling, 1978). In contemporary adaptive management, stakeholder participation is considered central to framing the management problem and identifying management outcomes or goals (Westgate et al., 2013). However, stakeholder participation in the context of adaptive management remains relatively understudied, and has, to our knowledge, not been assessed in terms of its coproduction performance.

Here we evaluate the coproduction performance of adaptive management as applied to South Africa's national parks. We do this by assessing a real-world application of “adaptive planning”—a sub-process of adaptive management that incorporates visioning and objective setting with diverse stakeholders. We (a) document the process of adaptive planning as applied by South African National Parks (SANParks); (b) develop a principle-based framework for assessing coproduction; (c) critically assess the practice of adaptive planning against selected principles of coproduction; and (d) provide insights from our real-world case study to help inform the design and facilitation of similar adaptive planning processes.

2 | METHODS

2.1 | Context to adaptive planning

The development and revision of park management plans in SANParks is guided by “adaptive planning,” a sub-process of a particular variant of adaptive management known as “Strategic Adaptive Management” (SAM; see Roux & Foxcroft, 2011). SAM has been iteratively developed and implemented by SANParks for more than 20 years (Freitag, Biggs, & Breen, 2014; Rogers & Bestbier, 1997; Rogers & Biggs, 1999) and follows the main generic steps and feedback loops common to most adaptive management conceptualizations (Figure 1). From its conception (which coincided with South Africa entering its postapartheid democracy in the 1990s), SAM included a participatory planning process, referred to as “adaptive planning.” Its purpose is to develop a shared understanding of problems, derive a vision of the desired state based on consensus, and develop a hierarchy of objectives to guide management action. Adaptive planning outcomes inform the scoping and implementation of management actions and monitoring programs, with evaluation and learning providing feedbacks for ongoing improvement of the overall

process (Figure 1). The adaptive planning process was first applied to revise the management plan for Kruger National Park. Although managers and researchers (many external to SANParks) constituted the majority of the stakeholders, the process generated the first publicly mandated plan (in 1997) for a national park in South Africa (Freitag et al., 2014).

2.2 | Case study: co-development of a management plan for the Garden Route National Park

The Garden Route National Park (GRNP) comprises 165,899 ha and extends approximately 150 km along the southern coastline of South Africa. It is a highly fragmented and unfenced national park with some areas of controlled access but mostly open access for neighboring communities and visitors. This park is best described as a complex of protected indigenous forests, mountain catchment areas, lakes, estuaries and marine ecosystems, all juxtaposed with semi-urban areas (including a gradient from exclusive properties of the affluent, to informal settlements with high rates of unemployment), commercial forestry, and agricultural landscapes.

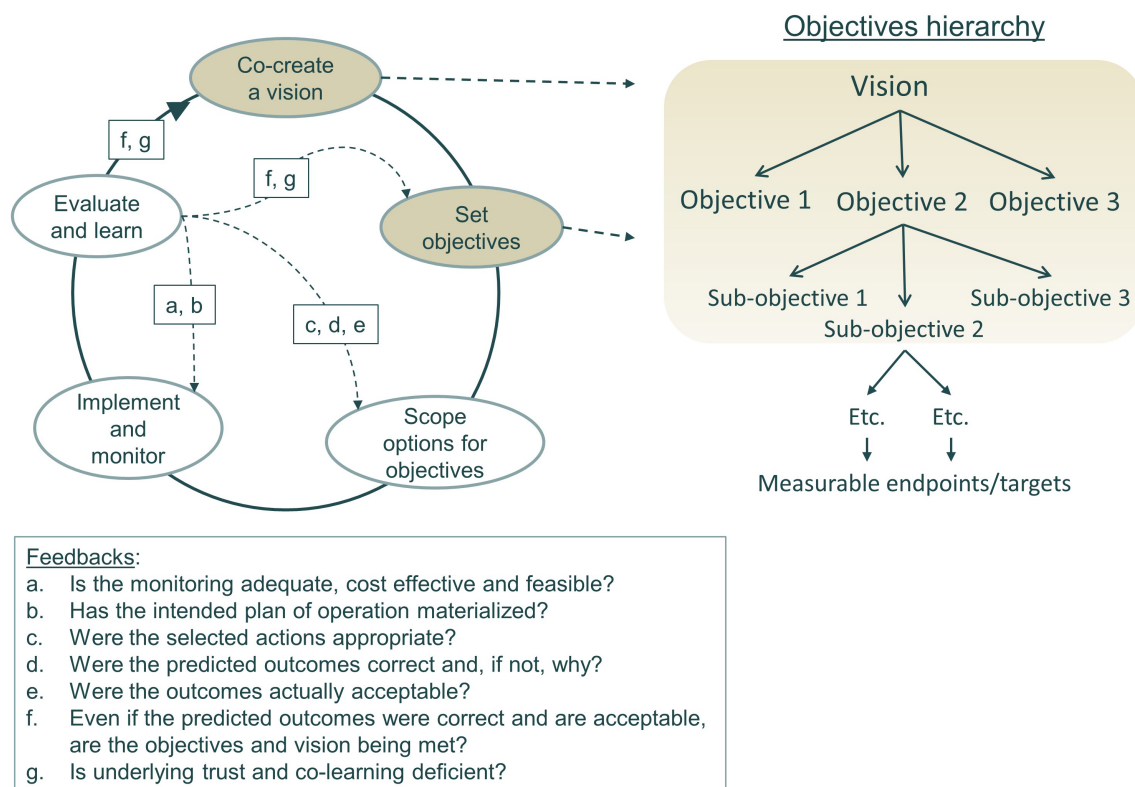


FIGURE 1 Strategic Adaptive Management (SAM), as conceptualized by SANParks in relation to the planning and implementation of management plans for national parks (modified from Roux & Foxcroft, 2011). The shaded steps represent adaptive planning with stakeholders and the focus of this study

National legislation stipulates that each national park must have a management plan that is developed in collaboration with stakeholders (National Environmental Management: Protected Areas Act; Act No. 57 of 2003). Existing management plans are periodically revised, also in collaboration with stakeholders and at the discretion of SANParks. A process for revising the then current management plan for GRNP (SANParks, 2010) began at the beginning of 2018. For the revision of the GRNP management plan, a Coordinating Team (consisting of managers, park planners, and researchers of GRNP) was convened to plan and guide the overall process. While the process broadly followed the requirements of national legislation and the SANParks SAM process, it was also influenced by local context-specificity. Here we provide a brief outline of the main steps followed (Figure 2), summarized from SANParks (2019, 2020).

2.2.1 | Desired state workshops

A total of 232 individuals participated in six public and one internal staff “desired state” workshops, which were initiated at the start of the planning process

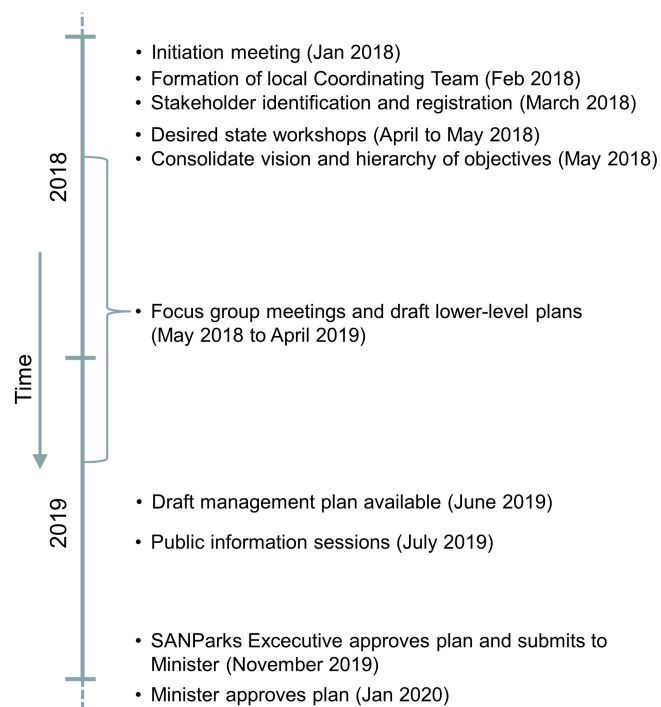


FIGURE 2 Time line and main steps of the adaptive planning process followed for Garden Route National Park. The overall duration was longer than the standard for national parks in general, because of an extension that was granted after devastating wildfires swept through parts of the Garden Route during October 2018

(SANParks, 2019). These participants represented stakeholders from wealthy and poor, peri-urban, and rural neighborhoods, and different user groups, political affiliations and languages. The majority of workshops were facilitated by external facilitators and some by SANParks staff. During desired state workshops, participants engaged in dialogue to: (a) reach agreement on values that should guide decision making in future; (b) explore the relevant social, technological, economic, environmental, and political contexts; (c) identify the vital attributes or special features of the park that are key to its unique character and therefore bear critical importance for its management; and (d) debate strengths, opportunities, and risks related to maintaining the vital attributes. Results from these deliberations were captured and displayed on multiple flip-chart pages, and provided a common basis from which participants (first in small groups and then collectively) articulated a vision and identified high-order objectives to guide the future management of the park.

At the end of the desired state workshops, a group of SANParks staff consolidated the information captured during the workshops into one vision statement and a consolidated set of high-level objectives. These objectives were then deconstructed into a hierarchy of lower-level objectives with ever-increasing focus until objectives reached a level where they could translate into actionable plans (Figure 3).

2.2.2 | Develop lower-level plans

“Lower-level plans” were then developed for clusters of inter-related lower level objectives. These plans followed a set template to address the rationale for the plan, its policy context, guiding principles, status quo, required actions, and indicators to measure progress. Plans were largely developed by SANParks scientists and operational staff, who drew on practical (and often tacit) lessons learned during the previous implementation period, new policy developments, and insights from the scientific literature. In addition, some lower-level plans, with particularly contested stakeholder perspectives, were informed by focus group meetings.

2.2.3 | Focus group meetings

While drafting lower-level plans, SANParks hosted 14 thematic focus group meetings, which engaged 315 stakeholders with a direct interest in various specific themes. Focus group themes aligned with lower-level plans thought to be especially contentious and/or for which it

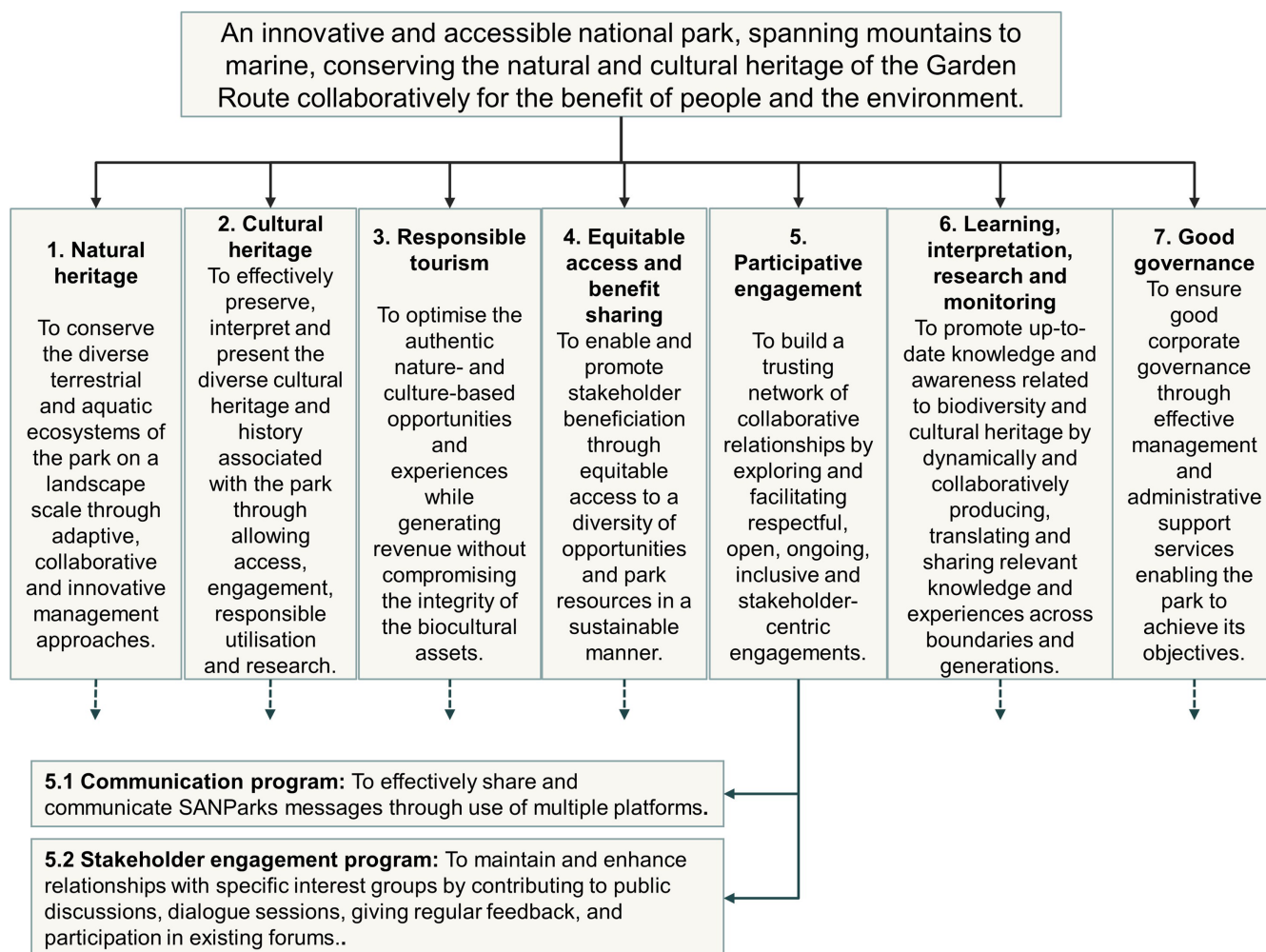


FIGURE 3 The vision and seven high-level objectives that emerged from the adaptive planning process for Garden Route National Park. For illustrative purposes, only the high-level objective for “participative engagement” has been decomposed into its lower-level objectives/programs. For more detail, see SANParks (2020)

was important to obtain stakeholder input. Themes included estuary management, natural resource use, cultural heritage, commercial concession opportunities, and park expansion.

2.2.4 | Public information sessions

The consolidated stakeholder-derived vision together with the hierarchy of objectives and lower level plans formed the basis of the draft park management plan, strongly nuanced by the rich discussions with stakeholders during desired state workshops. The draft plan was made available to the public online and in hard copy (at specific public localities in the region) prior to a series of six advertised public information sessions. During these information sessions, the draft plan was presented by park management staff who also facilitated the

meetings. Stakeholders in attendance had an opportunity to engage directly with park management to query and/or clarify issues while written comments could be submitted to SANParks for a 21-day period after these sessions.

2.2.5 | Document dissemination, public comments, and sign-off

All public comments received were responded to and/or addressed appropriately in the plan before submission for approval to the SANParks executive and finally to the Minister of the national Department of Forestry, Fisheries and Environment. The final plan (SANParks, 2020) was approved in January 2020 and published online (https://www.sanparks.org/conservation/park_man/approved_plans.php).

2.3 | Coproduction assessment framework and case evaluation

We developed a coproduction assessment framework containing five overarching principles for knowledge coproduction, each associated with a set of criteria and sub-criteria for use in evaluating the adaptive planning process (Figure 4; Table S1). The assessment framework was developed using the recently published principles of coproduction of Norström et al. (2020) as a starting point, namely, context-based, pluralistic, goal orientated, and interactive. Criteria and sub-criteria associated with each of these principles were identified based on the guidance that these authors suggest. We then supplemented this information with other reviews offering principles and guidance for coproduction (O'Connor et al., 2019; Wyborn et al., 2019). This led to the inclusion of an additional principle—actionable knowledge—and 13 further sub-criteria (Table S1). Additionally, we explored relevant peer-reviewed literature synthesizing lessons on stakeholder participation and collaborative processes, but which were not focused on coproduction principles per se (Clark, Van Kerkhoff, Lebel, & Gallopin, 2016; Fazey et al., 2014; Miller & Wyborn, 2020; Reed, 2008; Reed et al., 2018; Reed, Stringer, Fazey, Evelyn, & Kruijsen, 2014; van Kerkhoff & Lebel, 2015). Many recommendations from this additional

literature overlapped with the established set of principles, criteria, and sub-criteria. We found no new information, and were thus satisfied that we had achieved adequate saturation of existing guidelines. The sub-criteria were grouped under the associated principles and criteria and framed as questions that could be used to guide an evaluation process (Table S1).

Evaluation of the adaptive planning process was accomplished in an online workshop. We identified a group of evaluators from individuals who were closely involved in the planning process (i.e., SANParks staff) and/or engaged critically yet constructively during the process (including external stakeholders). Sixteen prospective evaluators (12 SANParks staff and four from stakeholder groups) were invited by email. Of these, 13 (10 SANParks and three external stakeholders) were available and participated in the evaluation.

The evaluation workshop was held on August 12, 2020 and consisted of one session of 4.5 hr with two convenience breaks of approximately 10 min each. Two of the authors (D. R. and J. N.) facilitated the discussion, starting by outlining each principle and criterion, and in the process indicating how each should ideally be met to enhance knowledge coproduction. The questions (Table S1) derived from the sub-criteria were used as broad guidance to stimulate discussion on each criterion.

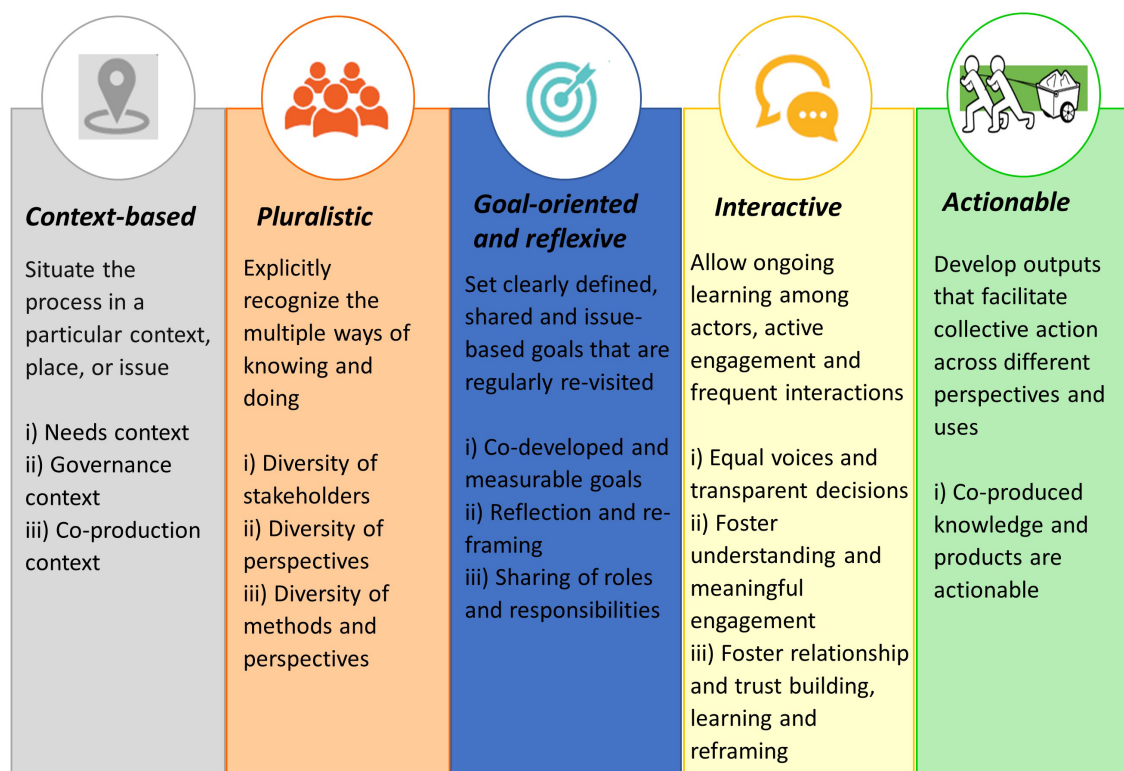


FIGURE 4 The assessment framework, with five principles of coproduction and their respective criteria, that was used to evaluate adaptive planning in Garden Route National Park

The discussion was recorded and transcribed. The content was mapped to principles and criteria. For each criterion, the authors compared the actual conditions as articulated by case evaluators with the idealized conditions for coproduction as reflected by the assessment framework, and rated the degree to which actual conditions satisfied idealized conditions on a three-point scale (high, neutral, low). The actual conditions were analyzed for general themes that emerged. We thus used a hybrid deductive-inductive approach in which we began with a deductive assessment framework and then inductively derived insights from the experiences raised by the evaluators.

3 | RESULTS

Illustrative quotes from the recorded dialogue are presented in Figure 5. The more detailed list of quotes in Table S2 informed the description and evaluation of the degree to which actual conditions in the case study satisfied idealized conditions of each coproduction criterion (Figure 6; Table S3). This showed that two of the 13 criteria had largely been met during the adaptive planning process. Four criteria were partially met, and seven had been poorly achieved (Figure 6). The coproduction criteria with high ratings were for coproduction context (specifically for stakeholder participation being well-embedded at relevant national, corporate, and local levels) and fostering understanding and meaningful engagement (for dedicated resources and efforts made to promote meaningful engagement). Partly met were coproduction criteria on governance context; diversity of perspectives; diversity of methods and approaches; and equal voices and transparent decisions. The coproduction criteria with low ratings were for needs context; diversity of stakeholders; co-developed and measurable goals; reflection and reframing; sharing of roles and responsibilities; fostering relationship and trust building, learning and reframing; and co-produced knowledge and products are actionable.

Three cross-cutting themes indicated shortcomings in meeting the coproduction criteria of Table S2, but did not relate obviously to any specific criteria. The first theme highlighted that one-size-fits-all approaches and methods constrained the effectiveness of stakeholder engagement in adaptive planning:

“The open-access nature of GRNP and its biophysical diversity present a much more challenging context than is the case for fenced parks with a primarily terrestrial focus” [P9]. “As far as methods go, this is pretty much standard in the planning process” [P4]. “The complexity of the GRNP

makes it difficult to standardize participatory processes” [P11]. “Public meetings might not be the best forums for all stakeholders” [P6].

The second theme indicated that the adaptive planning process was perceived to be time constrained and exhausting:

“The time to do proper stakeholder mapping is not there when you start with the planning process because you work to a pre-defined timeline” [P4]. “The process lasted over a year and this really is a long time to be keeping on to engage with stakeholders while still doing the normal run of the day activities... It is really a big investment of emotional energy” [P4]. “Some SANParks staff attended >20 meetings over the planning period and we should be aware of not only stakeholder fatigue but also internal fatigue” [P6]. “Even though there was exhaustion...” [P3].

The third theme suggested that the rigor of coproduction and stakeholder engagement declined during the course of adaptive planning and lacked continuity into implementation:

“Towards the end of the process, focus group meetings were not so well attended with probably the least robust engagement” [P6]. “We present lower-level goals back to stakeholders, but don't get very much feedback on this” [P4]. “Some strong voices withdrew because SANParks were not reactive to their views” [P2]. “I don't think there was that much ownership of the final product” [P4]. “Feels if there was this intensive communication and now it has just died down” [P13]. “We agree that continuous processes of communication and stakeholder engagement are important, but the irony is that the budget for these is one of the lowest in the management plan” [P6]. “...after the process we do not pick up the stakeholder engagement into the implementation phase – this is a real problem” [P4].

4 | DISCUSSION

More than two decades after its conception, adaptive planning with stakeholders has become a standardized



FIGURE 5 Selected quotes/paraphrases from case evaluators, arranged per principles. Speech bubbles stemming from the left support positive findings; and those from the right are quotes where efforts could be improved. Table S2 provides a more detailed account

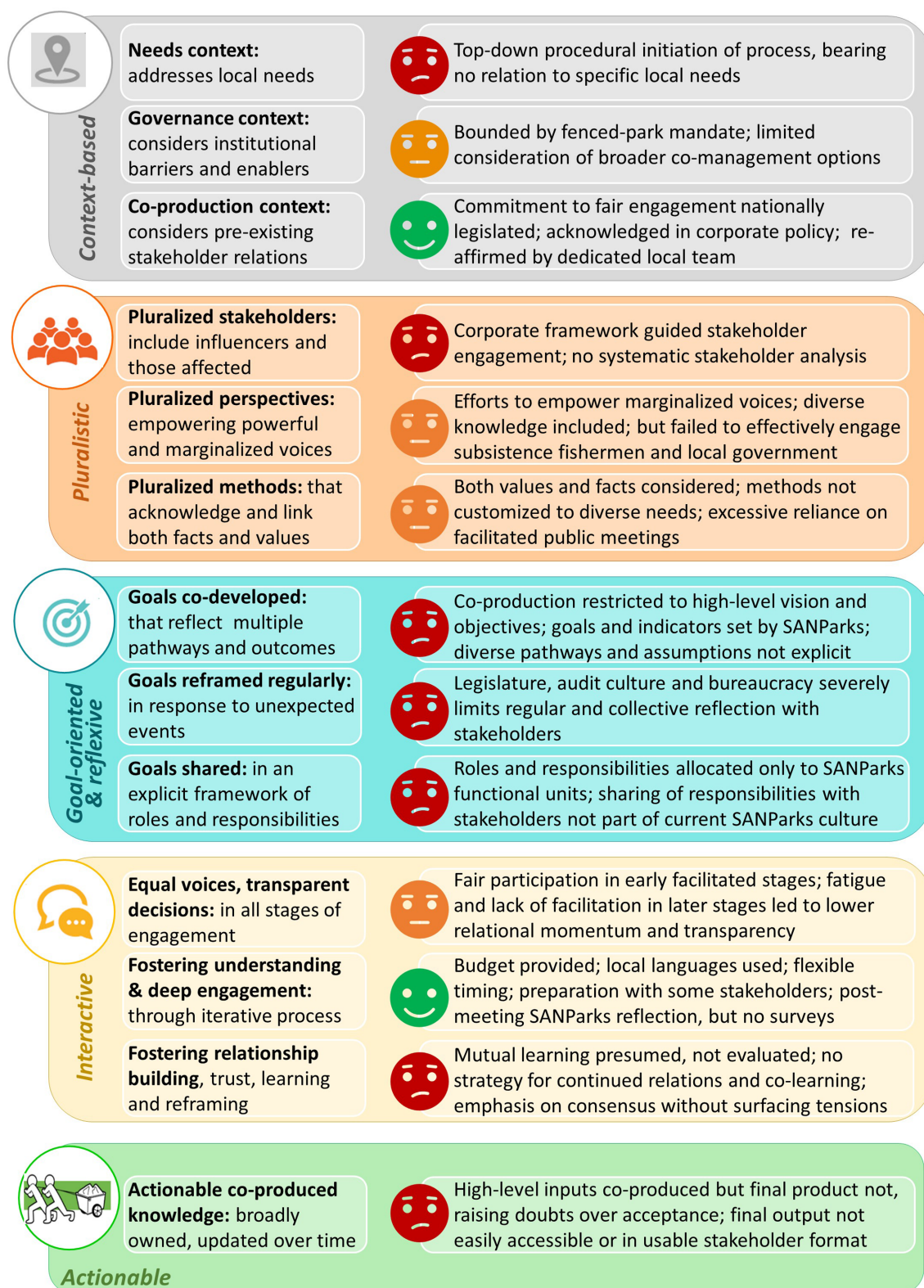


FIGURE 6 Comparison of idealized (based on the principles and criteria in our framework) and actual (based on the recorded dialogue of our case study) conditions for coproduction. Satisfaction with actual performance is indicated on a three-point scale, with smiling emoji indicating that actual conditions mostly satisfied idealized conditions (high satisfaction), neutral emoji indicating mixed performance (neutral satisfaction), and frowning emoji indicating that actual performance mostly did not satisfy idealized condition (low satisfaction)

and valued process within SANParks, and integral to the management of national parks in South Africa (Spies & Symonds, 2009). Our case study represents a first reflective assessment of this process, and a relatively rare account in the scientific literature of participatory mechanisms used for stakeholder engagement in protected area management (López-Rodríguez et al., 2020). What have we learned?

The unfavorable comparison of our case study conditions with idealized conditions for coproduction (Figure 6) came as a surprise to the authors as well as SANParks staff with whom we have shared the results. In SANParks, adaptive planning is generally regarded with pride as setting an example for stakeholder engagement in the conservation sector. Hence, the degree to which adaptive planning fell short of the aspirations for coproduction, as put forward by our theoretical framework, was unexpected. The surprise in itself signifies a valuable lesson, suggesting that blind spots for weak points can easily develop, especially for routine practices. This highlights the value of (a) regular and critical reflection on business processes and (b) using a rigorous and updated framework for doing so. Such reflective practice helps to avoid blind spots, and promotes ongoing learning and improvement.

4.1 | Key lessons from reflective evaluation

4.1.1 | Broadening narrow top-down agenda to include diverse local needs and governance contexts

In evaluating Principle 1 (coproduction is context-based), we found a mismatch between SANParks' motivation for and timing of adaptive planning, and the context-based ideals of coproduction. The directive to revise the park management plan came from SANParks default rule to revise the management plan of each national park every 10 years (a decision largely based on SANParks' capacity considerations). Local barriers and windows of opportunity were therefore not explicitly identified. Although there is provision in SANParks' policy to revise a management plan at any time, for example, in response to legislative changes or stakeholder dissatisfaction, this rarely happens in practice because "the time and effort to do a midterm revision is just not worth it" [P8] and because of the stretched local and corporate capacity to support and drive this. This reluctance to revise management plans any sooner than required may result in parks turning a blind eye to local needs and inadvertently overlooking many local windows of opportunity for revision.

Furthermore, the complex governance context of GRNP, with its diversity of ecosystem types and many overlapping governance regimes, received limited explicit consideration. Case evaluators felt that while SANParks' park-level adaptive planning process may be well-honed for traditional fenced parks, it did not cater well for GRNP. The complexity of open-access and terrestrial-estuarine-marine governance cannot be addressed within the timeframes allowed for adaptive planning. This finding is particularly pertinent as SANParks contemplates developing more open access parks (DEA, 2016), in line with increasing global calls not to exclude people in attempts to achieve global protection targets (Büscher & Fletcher, 2019).

4.1.2 | Empowering collective agency and action

This insight relates to all three criteria of Principle 3 (coproduction is goal oriented and reflexive). Our assessment highlighted a significant deviation between SANParks' adaptive planning process and what the coproduction literature suggests regarding the degree to which stakeholders co-develop, co-revise and own goals and indicators. In adaptive planning, stakeholder engagement is focused around three "contact points": (a) desired state workshops (co-creating a shared understanding of the problem, a collective vision of the desired state, and high level objectives for achieving the vision); (b) focus group meetings (obtaining input to lower-level plans that are deemed to be contentious); and (c) an opportunity to comment on the draft management plan. While we found that stakeholders truly co-produced the vision and high-level objectives of the GRNP management plan, they were not involved in the setting of the ultimate management goals and indicators or in any sharing of management responsibilities. Hence the feeling that "SANParks carry all the responsibilities and risk of managing e.g. an estuary, and gets whipped if things go wrong, while municipalities, home owners and recreational users enjoy enormous benefits" [P3].

The mismatch between SANParks' adaptive planning and the goal-oriented and reflexive ideal of coproduction might stem from adaptive planning having its roots in adaptive management (Roux & Foxcroft, 2011). While joint experimentation and deliberation between scientists and managers has always been part of adaptive management, participation of external stakeholders was first seen as merely a way to manage conflict and increase the pool of knowledge contributions and potential management solutions (Holling, 1978). Although recent adaptive management programs include collaborative identification of

management objectives with stakeholders as a standard step (Westgate et al., 2013), it does not extend to shared decision making and responsibility. The latter remains the purview of “adaptive co-management” (Plummer et al., 2012; Plummer & Baird, 2013), which represents a convergence between the concepts of adaptive management and co-management.

Further, SANParks’ adaptive planning aligns with a “top-down deliberation and/or coproduction” type of participation, whereby engagement is “initiated and/or led by those with formal decision-making power who wish to empower interested parties with less power and diverse perspectives to make or contribute towards decisions” (Reed et al., 2018, p. 3). According to Reed et al. (2018), this type of engagement may range from exploring suggestions with stakeholders prior to the organization making its decision (akin to adaptive management) to a more co-productive approach where decisions are jointly developed and owned by the authority and stakeholders (as in adaptive co-management). Participation of stakeholders in the adaptive planning process is largely framed around SANParks being in control (the mandate to manage on behalf of society is legislatively assigned to SANParks), and serves mainly to share understandings, manage conflict, increase knowledge contributions and elicit potential management solutions. While such an approach may work more readily for fenced parks, it falls short with GRNP where many ecosystems are characterized by overlapping governance mandates, unrestricted access and competing user interests. Even in fenced parks, there is a realization that decision making requires a broader decision context, which deeply embeds diverse stakeholder values and needs into park management plans (Zafra-Calvo et al., 2019). In our case study, the local Coordinating Team acknowledged the shortcomings of a top-down approach in the context of GRNP, stating: “SANParks need to be upfront that they are equal stakeholders in developing the plan. The trade-off is between how much you want to own the process, and how much you want to facilitate a neutral process” [P4]; and being prepared “to fight for what emerged from the process, even where it differed from the SANParks template” [P4].

4.1.3 | Embedding co-learning as an ongoing journey

Adaptive planning in our case study underperformed against the criterion for fostering relationship and trust building, learning and reframing (Principle 4: coproduction is interactive). On the positive side, we found that the local Coordinating Team made a genuine effort to enable meaningful engagement with all stakeholders. An intent to collaborate with stakeholders is reflected in the vision

(“...conserving the natural and cultural heritage of the Garden Route collaboratively...”) and High-Level Objective 5 (“to build a trusting network of collaborative relationships”) that emerged from the process (Figure 3). This latter objective had two sub-objectives, on communication and stakeholder engagement respectively, for which lower-level plans were compiled (SANParks, 2020). These lower-level plans included actions to: effectively communicate SANParks’ messages to stakeholders (e.g., using social media); host and participate in community events; review and update stakeholder database; improve staff and stakeholder capacity for dialogue; and develop guidelines to improve SANParks’ participation in public forums. However, our case evaluators were clearly apprehensive about SANParks’ ability (including a relatively small budget allocation) to effectively sustain the newly created relationships and trust beyond the adaptive planning exercise.

Wyborn et al. (2019) suggest that co-design is “a critical time for framing and generating knowledge, building capacity among participants, and developing pathways and coalitions to mobilize transformative change.” This was achieved during adaptive planning, but largely restricted to the desired state workshops and some focus groups. The lower-level plan for ongoing stakeholder engagement lacked an emphasis on iterative and two-way learning that should underpin participatory approaches (Reed, 2008). For example, there is no mention of proactively creating space for managers, researchers, and stakeholders to continue their co-learning journey while navigating toward the vision. Promoting effective co-learning is a necessary condition for navigating complexity and achieving desirable coordinated action in complex multi-use landscapes (Pahl-Wostl, 2009).

Hesitancy to commit to ongoing learning with stakeholders beyond the development of a vision and high-level objectives perhaps follows from the way adaptive management is traditionally practiced, linked to a legislatively and culturally entrenched mandate of managing on behalf of society. Hence, the steps that follow from adaptive planning (management action, research, monitoring, and evaluation; Figure 1) largely occur without stakeholder involvement. However, there are increasing calls for involving stakeholders not only in the setting of management goals/objectives but also in ongoing monitoring and adaptation of decisions in adaptive management (Cundill, Cumming, Biggs, & Fabricius, 2012; Gunderson & Holling, 2002) as is integral to adaptive co-management.

4.1.4 | Beyond standardized approaches

Cross-cutting to a number of principles, the standardized SANParks approach for engagement was not optimal for the GRNP context. Disharmony between SANParks’

generic process (Spies & Symonds, 2009) and the local context manifested in three main areas: (a) an inflexible timeline that did not match the complexity of the GRNP; (b) engagement approaches that did not cater optimally for the full diversity of stakeholders; and (c) lack of explicit consideration of the multi-governance demands from overlapping legislative requirements.

Regarding the engagement approach, the local Coordinating Team devoted considerable time to planning for the GRNP-specific context, and responded to stakeholder feedback. Thus, for example, additional after-hour meetings were scheduled in some villages and community centers to accommodate employed stakeholders or those without transport. However, there was an overwhelming feeling that engagement formats could have been more innovative and that more time was needed to allow meaningful engagement with at least some groups (e.g., subsistence fishers). A systematic stakeholder analysis (Reed, 2008) could have helped to tailor engagement formats to the needs of specific groups.

Ironically, one-size-fits-all approaches are contrary to the adaptive philosophy advocating active experimentation and learning from alternatives. The compliance culture, demanding predictability and control, seems to have stifled this spirit of experimentation and adaptation when it comes to application of adaptive planning. For example, less bureaucratic rigidity may have allowed for mid-way adaptation to the planning process when devastating wild-fires burnt through parts of the Garden Route during October 2018. Although an extension of the deadline for producing the park's management plan was granted, little if any mid-way adaptations were made. This suggests that the process lacked flexibility to respond to unexpected impacts and opportunities, in part because delivery of the plan is embedded in multiple performance agreements that are not amenable to frequent or large change.

While stakeholder fatigue is a common concern in the context of participatory processes (De Vente, Reed, Stringer, Valente, & Newig, 2016; Reed, 2008), case evaluators in our study also testified to significant fatigue experienced by SANParks staff during adaptive planning. Fatigue on the part of both staff and stakeholders probably caused a decline in the quality of engagement during the course of adaptive planning engagements. This can, at least in part, be attributed to the diversity of both ecosystem types and stakeholders, resulting in many and diverse vested interests.

4.2 | Utility and modification of the assessment framework

Overall, the assessment framework offered a systematic approach for evaluating the GRNP adaptive planning

process. The framework used five principles recently synthesized in the coproduction literature, and operationalized these using criteria and sub-criteria drawn from the coproduction, stakeholder participation, and transdisciplinary research literature. We found that this helped to shift attention beyond the co-produced product (in this case, a protected area management plan) to also emphasize process. This is in line with much coproduction literature, which shows that an over-emphasis on knowledge compared to other procedural aspects (such as relationship- and trust-building, and clarifying institutional roles) can limit the ultimate aim of collective action (Miller & Wyborn, 2020).

Using the assessment framework, we identified clusters of important discussion threads—the four lessons above—which spanned the principles and gave valuable insights to inform the recommendations for evolving the future adaptive cycle. These include the following relatively simple enhancements to the process: incorporate systematic stakeholder analyses; do regular satisfaction surveys and document shifts in stakeholder perspectives; encourage parks to experiment with innovative and dynamic engagement approaches, as informed by the stakeholder analysis and satisfaction surveys; and implement ongoing small revisions, responsive and sensitive to local needs and windows of opportunities, rather than completely redoing the entire park management plan every 10 years. The latter will help to counter many shortcomings of the current process, including lack of sensitivity around timing, weak responsiveness to local needs, lack of continuity in stakeholder engagement, and perceptions that the process was time constrained, overwhelming and exhausting. It will also stimulate iterative co-learning and help to maintain and inspire collective momentum toward an overall evolving vision.

The study also yielded two deeper insights: (a) adaptive planning as practiced by SANParks does not meet the standard of stakeholder participation advocated by the principles of coproduction, and (b) SAM (and adaptive management generally) does not seem to fully align with these principles. Furthermore, while coproduction appears to be an appropriate form of participation for protected areas characterized by overlapping governance systems and multi-use stakeholders, such areas may be better served by adaptive co-management. This study indicates that, in the same way that SANParks has updated its dominant management paradigm every few decades over the past century (Venter, Naiman, Biggs, & Pienaar, 2008), it may be time to consider adaptive co-management as an option particularly for parks and ecosystems characterized by overlapping policy mandates and potential for high user contestation. SANParks could then purposefully experiment with coproducing

management actions and performance indicators with stakeholders, and sharing responsibilities related to implementation.

Reflecting with case evaluators on the utility of the assessment framework highlighted gaps in the comprehensive evaluation of the resources and support required for undertaking the adaptive planning process. While the framework interrogated whether funding and time of staff were made available for engagement, evaluators felt that the deeply participative nature of the planning process required support beyond this to inspire and equip staff to be more effective at engaging publics. This includes skills training, as well as coaching and counseling for the stresses of fatigue, public abusiveness and individual risk that they encountered. At the moment a lot is left up to moral choice, individual risk strategy and self-sacrifice of staff members themselves. We have consequently made this more explicit in sub-criterion 4.2.1 “Were sufficient resources and time available for engagement” by adding the qualifier: “This includes assessing budget for producing the outputs compared to that for engagement/collaborative activities as well as the provision of adequate skills training, staffing capacity, time, and emotional and legal counselling” (Table S1).

5 | CONCLUSION

Our study provides insight into how conservation agencies can facilitate more effective stakeholder participation in protected area management through adaptive planning. Our novel coproduction framework, based on a set of five principles and thirteen criteria, proved useful as an assessment tool, stimulating critical reflection from which we were able to evaluate the actual performance of the thirteen criteria. Evaluators also identified an additional assessment gap, which was added a posteriori (on deeper interrogation of resources and support for the process). We believe this a posteriori coproduction framework can be used as a basis to inform the design and evaluation of stakeholder engagement processes in other protected area contexts.

The assessment framework indicated shortcomings in the degree to which the adaptive planning process enables stakeholders to participate in making decisions that affect them. We found that the adaptive planning process, and by implication adaptive management, did not align well with the ideals of coproduction. While adaptive management in SANParks is designed to engage with stakeholders around their perspectives, needs and visions, it is still primarily implemented as a single-agency tool, where SANParks retains primary decision making control and responsibility, and by default carries most of the risks. We

suggest that the principles of coproduction may be better supported by an adaptive co-management approach, which would broaden from a single SANParks mandate for implementation, to involve stakeholders in formal decision-making. Our finding was particularly evident in the context of the open-access GRNP and may not be as pronounced in parks that are fenced and without the complexity brought about by overlapping policy mandates and contested ecosystem governance. Worldwide, calls are mounting to reduce reliance on fenced protected areas—where resources are “locked away” from people—to more open access areas that are equitable and reconnect to local community needs. It therefore seems timely to be adaptive about the adaptive management process itself—and align it with co-management and coproduction approaches more suited to parks which inspire collective action and in which responsibilities and risks of joint decision making are shared.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Dirk J. Roux, Jeanne L. Nel, and Stefanie Freitag conceptualized the project. Jeanne L. Nel and Dirk J. Roux developed the assessment framework and conducted the investigation. Eureka Rosenberg and Stefanie Freitag contributed to the development of the methodology and Peter Novellie contributed to analysis of the data. Dirk J. Roux and Jeanne L. Nel wrote the initial draft of the manuscript and all authors helped to review and edit the manuscript to its final format.

ETHICS STATEMENT

Ethics approval for conducting this research was obtained from the Education Faculty Ethics Committee of Rhodes University (Code 1562 Jul 2020).

DATA AVAILABILITY STATEMENT

Data will be made available upon request by the corresponding author.

ORCID

Dirk J. Roux  <https://orcid.org/0000-0001-7809-0446>

Jeanne L. Nel  <https://orcid.org/0000-0001-6220-770X>

Stefanie Freitag  <https://orcid.org/0000-0001-7466-6778>
 Peter Novellie  <https://orcid.org/0000-0003-4243-1004>
 Eureka Rosenberg  <https://orcid.org/0000-0001-7421-7120>

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SUPPORTING INFORMATION

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