



# THE BENEFITS OF THE IUCN GREEN LIST FOR IMPLEMENTING EFFECTIVE PARK MANAGEMENT IN QUEENSLAND, AUSTRALIA

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## ABSTRACT

The Queensland Government in Australia is applying a values-based approach to park management across the State's protected areas based on international effective and equitable management principles. To showcase successful park management in practice and to identify areas requiring improvement in the approach, the Queensland Government is participating in the IUCN Green List programme. Nomination of Lamington National Park, Australia's first World Heritage protected area to be assessed, has shown the importance of linking strategic planning to in-park operations, the advantages of working collaboratively internally and externally, the importance of capacity for park management and establishing long-term goals and investment, effective ways to 'close the gap' on adaptive management, and the flow of benefits to other protected areas across the State.

**Key words:** effective management, evaluating success, adaptive management, protected areas, World Heritage

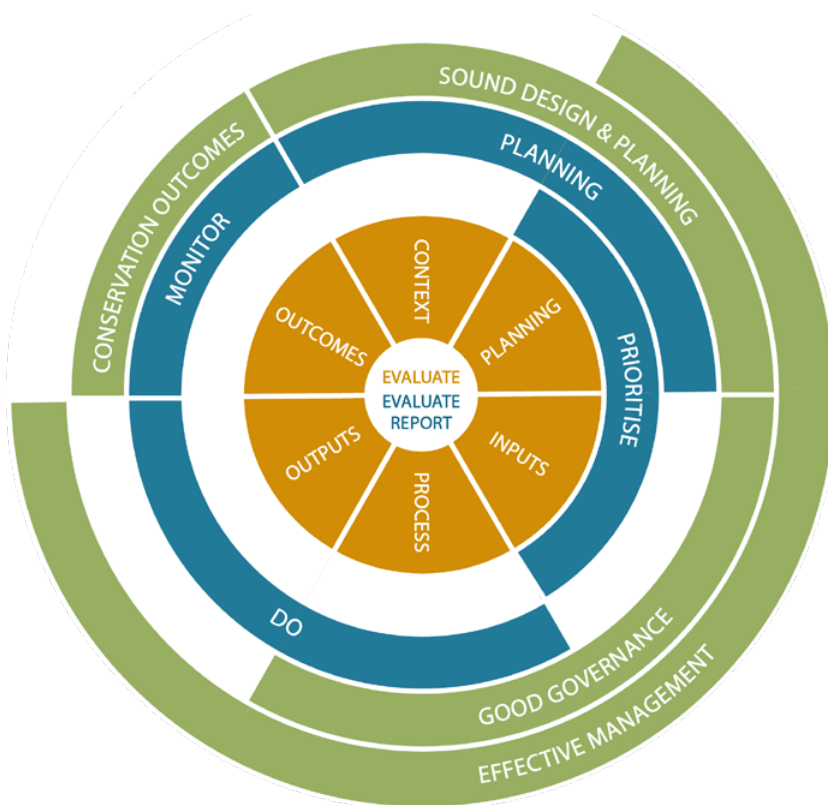
## INTRODUCTION

A global biodiversity crisis is looming, and a significant driver is habitat loss and fragmentation (Secretariat of the Convention on Biological Diversity, 2020). One of the significant instruments in managing this crisis is area-based conservation with protected areas being recognised as a key tool in aiding conservation (IPBES, 2019; Watson et al., 2023; Woodley et al., 2019). Effectively managed protected areas have been proven to halt the decline of threatened or endemic species and provide a place for evolution and future ecological adaptation, including adapting to climate change, protection and delivery of ecosystem services, preservation of cultural values and cultural practices, and supporting local and regional economies (Dudley, 2008; Lopoukhine & de Souza Dias, 2012; Watson et al., 2014; Woodley et al., 2019).

Global conservation targets to set aside a global protected area network are aimed at stemming the current and future rates of biodiversity loss. The Kunming-Montreal Global Biodiversity Framework includes a target for adopting nations to set aside 30 per cent of their land

and sea areas under protected areas that are effectively conserved and managed to reduce key drivers of biodiversity loss (Convention on Biological Diversity, 2022; Woodley et al., 2019). Setting both quantity and quality targets is required to achieve biodiversity conservation (Green et al., 2019; Woodley et al., 2019). Well designed, governed and managed areas should recognise the rights of Indigenous Peoples and local communities, be established on areas of key biodiversity, support ecological networks, and be well designed, governed and managed (Watson et al., 2023; Woodley et al., 2019; Woodley et al., 2021).

Many protected areas around the world, however, are not managed effectively (Visconti et al., 2019; Watson et al., 2014; Woodley et al., 2021), with reports of around half or more of protected areas globally having deficiencies in management (Leverington et al., 2010; Watson et al., 2014). For protected areas to achieve biodiversity outcomes, effective management of protected areas is essential, and to date there have been a number of guidelines and processes employed with the aim of encouraging and assessing protected area management



**Figure 1.** VBMF achieves protected area management effectiveness using principles structured according to six distinct stages (inner circle – orange) (Hockings et al., 2006) through planning, prioritising, doing, monitoring with evaluating and reporting (middle circle – blue) (Queensland Government, 2023). The IUCN Green List’s four components of successful nature conservation in protected and conserved areas are used to assess how the VBMF achieves adaptive management and management effectiveness (outer circle – green) (WCPA, 2017).

effectiveness (Bialowolski et al., 2023; Coad et al., 2015; Hockings et al., 2006; Leverington & Hockings, 2004; Stolton et al., 2007).

The IUCN Green List of Protected and Conserved Areas Standard is a set of criteria that describes best practice for managing protected areas and conserved areas effectively and equitably with the aim of increasing the number of those areas delivering successful conservation outcomes (Hockings et al., 2019; WCPA, 2017). The standard is made up of four components, ‘good governance’, ‘sound design and planning’, ‘effective management’ leading to ‘successful conservation outcomes’ (Hockings et al., 2019; WCPA, 2017). Nominated sites are assessed against this international benchmark, with sites meeting the sustainability standard recognised as part of a global community for delivering fair and effective nature conservation.

### Effective and equitable management of Queensland’s protected area estate

To instil good governance and management, the Queensland Government, Australia, is successfully applying a values-based approach to park management across the State’s protected areas (Department of Environment and Science, 2020) through the Values Based Management Framework (VBMF). The VBMF is an adaptive management system based on international effective and equitable management principles (Hockings et al., 2006) and builds upon previous park management practices to improve management across Queensland’s

protected area estate. Targets set by the Queensland Government focus on embedding the VBMF approach in national parks and other protected areas, building a monitoring, evaluation, reporting and improvement system, and participating in the IUCN Green List programme.

Queensland’s participation in the IUCN Green List programme is two-fold, showcasing management of national parks and other protected areas, and identifying gaps to improve VBMF alignment with best practice. The VBMF enables Queensland’s park managers to prioritise the most important values, provide strategic management direction through planning, prioritising, doing, monitoring, evaluating and reporting (Figure 1).

World Heritage listed Lamington National Park (Lamington) is Queensland’s first protected area nominated for Green Listing. The associated assessment process has brought about significant benefits for both park management at Lamington and across Queensland’s protected area estate. Lamington is managed by the Queensland Parks and Wildlife Service (QPWS), an agency within the Department of Environment, Science and Innovation. The purpose of this paper is to discuss how the Green List process supported the implementation of the VBMF at Lamington and the key lessons learnt and applied during the process, including:

- The importance of linking strategic planning through to park operations;
- The effectiveness of working together across all levels and areas of the agency and with external

- stakeholders;
- The importance of capacity to undertake park management, address long-term goals and secure investment;
- Understanding the condition of park values and how to use that information to ‘close the gap’ in adaptive management; and
- Advantages to the region and management of the entire protected area estate.

This paper is based on the experience of undertaking the Green List accreditation process for Lamington and information gathered at a follow-up workshop of rangers, regional technical staff, and central/head office planning staff discussing the Green List accreditation process. Anonymous quotes from workshop participants are indicated throughout the paper using double quotation marks and designated with an ‘a’ for Lamington park staff, ‘b’ for regional staff and ‘c’ for central/head office staff.

## Linking strategic planning to park operations

Understanding the link between actions and outcomes is an important part of adaptive management, but significant connections are not always obvious. Therefore, having strong links between good planning and park operations is a key step in evaluation. Prior to VBMF, direction from the executive level did not always align with planning and operations at the park level, meaning there was uncertainty around the agreed outcomes for park management. This resulted in reduced clarity around management actions, priorities and agreed outcomes across different sections of the agency. There was also a weak connection between rangers’ park observations and the subsequent planning required to prioritise actions, making it difficult for rangers to obtain appropriate resources in a timely manner to implement effective management.

The VBMF provides a two-way process to prioritise and communicate decisions. To develop clear adaptive management objectives that accurately address the needs and concerns of a protected area, data and knowledge are required from all levels of staff, particularly those with direct understanding of a park’s issues (Allen et al., 2019). The VBMF provides a means for transfer of that knowledge, comments received from rangers included: “My gut was telling me what we were doing was not what we should be doing, VBMF is strong, you can make a much better argument for where you should be putting your resources”<sup>b</sup>, “it gives us better transparency and not going on ranger intuition or experience”<sup>a</sup>, and “[it gives us the] ability to succinctly communicate our management actions”<sup>b</sup>.



One of the barriers rangers said they experienced was “no consistent approach, executives not ‘singing from the same song sheet’ with aligning planning and priorities to the business planning level”<sup>a</sup>. Not applying and using planning, evaluation and management tools in delivering on-ground actions is a common issue in effective protected area management (Leverington et al., 2010). The “VBMF is forcing that line of sight and linkages all the way down so that you’re tracking the delivery of the plan”<sup>b</sup>. Having a strong framework in place supported by all levels of the agency is providing the mechanism to set well informed priorities and agreed outcomes. This leads to having a more transparent and accountable process and improved communication across the agency.

Staff felt there was a focus on management of critical infrastructure with very little emphasis on conservation or natural resource management objectives. As one staff member stated, there is a “constant challenge, [management of] 150 kilometres of walking tracks is hard work, somehow you have to balance that with the other work that needs to be done”<sup>a</sup>. Identifying key values through the VBMF, and prioritising objectives across conservation and asset maintenance, refocused management intent and embedded the priorities in

planning. This helps justify and communicate to stakeholders internally and externally that “our core fundamental business is conservation and you’re going to see us prioritising conservation actions over certain other things”<sup>b</sup>.

The Green List assessment process was the platform that enabled QPWS to look more closely at the linkages between planning and operations. “I don’t think we would have done such a deep dive into operationalising work that we’ve been doing without Green List to trigger those conversations”<sup>b</sup>. The process identified gaps, and, as one staff member stated, it “helped us to better understand all the moving parts and build the rest of [VBMF]”<sup>b</sup>. How planning is integrated into business and used to inform resourcing was identified as a weak point, with one staff member stating that the “Green Listing process specifically for Lamington highlighted how we still haven’t got that right”<sup>b</sup>.

### **‘It takes a village...’ - the benefits of working together as a ‘community’**

Governance of protected areas is no longer solely the responsibility of government authorities, with contemporary approaches to park management now including informal arrangements and support from non-government organisations, local communities, academia, private contractors, or co-management in partnership with First Nations (Lockwood, 2010). It is recognised that it ‘takes a village’ to manage a protected area and that better conservation outcomes are achieved when integrating stakeholders such as local communities (Maxwell et al., 2020). The phrase ‘it takes a village...’ is very relevant to management of Lamington. A complex, highly biodiverse protected area, Lamington receives input and support from a wide range of branches within the agency as well as external stakeholders and rightsholders.

Applying the Green List assessment identified gaps in communication that were limiting the agency’s ability to implement the VBMF and achieve strategic management outcomes for the park.

### **Communication internally**

Lamington has two operational work bases and requires a significant amount of support from the regional and central/head office. Effective communication is required to appropriately manage Lamington’s high biodiversity and multifaceted vegetation, complex fire and pest management requirements, significant assets, and very high visitor and compliance obligations. Prior to VBMF being implemented, Lamington’s management priorities within the region and State were not well prioritised

when compared with other parks, which had precedence due to social and political pressures.

Introducing VBMF resulted in improved agency coordination from better communication of management requirements, both ‘bottom up’ (i.e. what is happening in the park and what needs prioritising through the regional process) and ‘top down’ (i.e. what are the state-wide and regional priorities and how do they fit in with on-ground management). This is an important aspect of protected area management for ensuring unified management objectives and strategies (Allen et al., 2019).

Applying the Green List indicators drove many communication improvements within the agency. “The Green Listing process was so thorough and robust that we had to bring everybody in that you know holistically across Lamington into that discussion”<sup>b</sup>. It provided a mechanism for Lamington’s rangers to be more aware of adaptive management and management effectiveness principles and to gain better understanding of why VBMF is important and how it relates to their day-to-day operations. The process also significantly improved communication and networking between park staff and other areas of the agency. Staff members said: “it’s a lot easier to get help”, “I think it’s made things easier to access and getting support from [regional and central/head office staff]”<sup>a</sup>.

### **Communication externally**

Lamington has historically involved a large number of external stakeholders and has significant visitor interest, and these characteristics remain in evidence today. Effective park management requires incorporating the views and interests of local communities, using results of scientific research in planning, and managing protected areas in partnership with First Nations People. With complex parks such as Lamington, outside assistance from non-government organisations, neighbours and volunteers helps bring about more positive conservation outcomes.

For example, Lamington’s two volunteer organisations, the Lamington and the Green Mountains Natural History Associations, have existed for over 40 years (IUCN, 2019; Panorama, 2020) and are often the first point of contact for park visitors at information centres. It is important that the volunteers have a good understanding of park management and planning, through formal training and informal communication. The Lamington Green List assessment identified communication gaps in the support QPWS provided to the volunteer groups. In response, QPWS introduced steps to ensure volunteers had awareness of Lamington’s key values, threats and



**Figure 2.** Example of a poster case study showcasing management of the endangered Eastern Bristlebird (*Dasyornis brachypterus*). The case study provides an example of the planning process, link to on-ground management, and conservation outcomes. The case study posters are found at the two information centres. © Eastern Bristlebird (Grant Fraser, QPWS), fires (Wil Buch, QPWS).

how QPWS is managing them, and delivered ‘health check’ days showcasing how monitoring is undertaken to inform park management.

The Green List process also initiated the use of tools such as poster case studies (Figure 2) that showcase adaptive management in action. These tools are now used by volunteers in the information centres to give visitors an understanding of Lamington’s management priorities and how park management operates.

The Green List process assisted in stakeholder engagement. As one staff member said, “the key thing through the Green Listing was our stakeholder management and our cross-landscape collaboration”<sup>b</sup>. It is important for park staff to be able to communicate park management objectives, issues and policies, balanced with the complexities of maintaining visitor experience, accessibility and services. The range of different uses at Lamington places a high demand on managing walking tracks (trails), and other recreational activities and services. VBMF planning supports QPWS decision-making and justification. Staff stated, “that’s

the benefit, we’re more transparent and can explain and demonstrate those priorities in a better way”<sup>a</sup>; and “doing 20% less on walking tracks [now and] prioritising conservation actions (i.e. health checks and bushfire recovery), I used exactly those words with stakeholders in response to questions about track maintenance [and was able to justify that] fire management is priority one over the next two months”<sup>a</sup>.

### What does ‘capacity’ mean for Lamington National Park and how does that help achieve effective park management?

Capacity, in its simplest form, is the ability to deliver what is needed. For effective protected area management, this occurs on multiple levels from individual, organisational, through to societal, and is essential for achieving conservation goals (Porzecanski et al., 2022). Understanding the capacity requirements of Lamington has been a gap for some time. As a staff member stated, “[Lamington is] an exceptional World Heritage park. What does the level of resourcing look



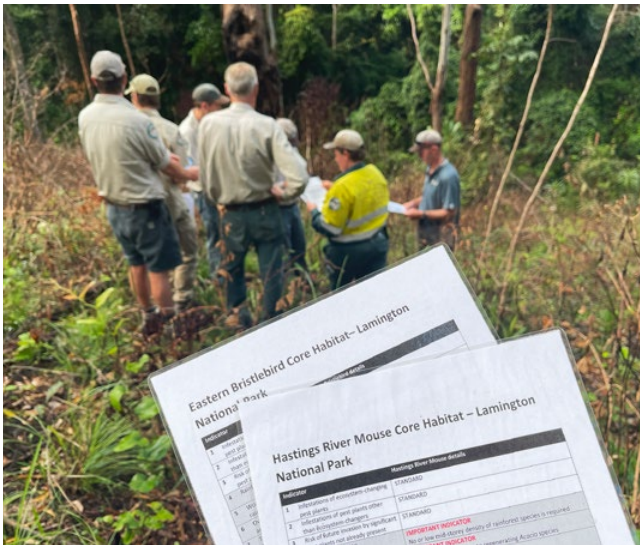
Rangers undertaking health checks in Lamington National Park's rainforest key values © Sherri Tanner-McAllister

like for a park like that?"<sup>b</sup>. Having a good planning and evaluation framework in place is beginning to provide those answers. A staff member noted "the VBMF has helped identify all the different moving parts of operations and what that looks like in terms of system support, resource support and all the different programs that we are managing"<sup>b</sup>.

Ad hoc capture and transfer of knowledge, with high staff turnover rates, reduces the capacity of QPWS staff to manage Lamington effectively and makes planning and management vulnerable. One of Lamington's obstacles is "retention of staff given the nature of the work and access to the park"<sup>a</sup>. Having VBMF well implemented and using the Green List process "our work plan at Lamington is pretty steady, I feel like it's stable, like we have set the targets that we have to do every year no matter what"<sup>a</sup>, a QPWS staff member reflected. This has assisted in knowledge transfer. One park staffer said "I don't think there would have been a lot of understanding of even our vegetation types or values for a lot of those rangers coming through and even the permanents now"<sup>a</sup>. The VBMF system also aided successional planning, as stated by a ranger, "to step in as Ranger in Charge would have been tricky, harder ... but because we've got those

strategies in place now with fire, visitors, I think that makes it easier"<sup>a</sup>.

The Green List assessment identified gaps in the use of systems to support the staff knowledge base and a lack of adequate training in system use. For example, with the QPWS Asset Management System, it became evident that rangers were not comfortable using it; therefore, the information in the system needed to be cleaned up, and was not used fully to support the ranger's work. As staffers noted, it was shown through "Green Listing and effective park management that it does take additional resources to do this completely, e.g. like getting the systems up to date"<sup>b</sup>, but "it's highlighted that it's all well and good to plan and say we're doing these things, if our systems can't give us the data to be able to assess those objectives, the whole thing falls apart"<sup>b</sup>. Another aspect highlighted by staff about the Green List process was that "there should be some structure to how we do business for operational rangers and their line managers, they should be able to go from [one] management unit to another and understand the core fundamentals and framework"<sup>b</sup> such as the use of key systems for fire, pest and asset information.



Lamington National Park rangers undertaking health checks © Sherri Tanner-McAllister



Monitoring schedule in Lamington National Park's office © Sherri Tanner-McAllister

### ‘Closing the loop’ and why this is important for adaptive management

Research, monitoring and evaluation of park management is required to be incorporated back into planning to ‘close the loop’ for adaptive management. Monitoring and setting thresholds with triggers for management response provide the mechanisms to do that. The use of monitoring data enhances robust decision-making and informs planning to improve management effectiveness. As part of the VBMF, Queensland has an established monitoring approach using ‘health checks’ as the foundation for efficiently and routinely monitoring the condition of key values (Melzer et al., 2019). As a statewide monitoring system embedded into day-to-day operations, it provides a consistent method to track the condition of key values, expose new and emerging threats, and provide a mechanism for identifying research needs.

Monitoring has historically not been a strong aspect of Queensland’s park management. As staff members stated, “we have had a variety of monitoring options, but they’ve never taken root in operations because they never involved all the staff”<sup>a</sup>. Prior to the VBMF and the Green List, staff stated that “condition of values, we had an idea, but I don’t think it was tracked or written down”<sup>a</sup>; and “historically conservation projects have all been an ad hoc collection of pet projects, there was no standardised way to know what was special about the park and what was a condition and trend”<sup>b</sup>. Participants noted that with systematic planning and consistent monitoring and research strategies, QPWS has now begun to deal with those historical issues. “Health checks are the first step of drawing long bows [linking] action and outcome and having that consistently documented through a health check program means that we’ve at least started that process at Lamington”<sup>b</sup>. “VBMF and the Green List made us take the evaluation step even further and try and complete loop”<sup>b</sup>.

Staff also noted that “the element that Green Listing helped us do is dive into linking health checks, seeing how those actual conservation outcomes can then inform future planning and what we need to do, showing that full cycle”<sup>b</sup>. Monitoring is a key step in the VBMF evaluation process: “having health checks, in a way, they’re forcing that evaluation, to stop and think about what you’re doing with your programs is a change for us”<sup>b</sup>. A consistent approach allows for comparable results as part of a State-wide evaluation programme ensuring a more consistent prioritisation of resources and support. One staffer said: “it’s really standardised the approach to what is a value, what is a standard condition for these values, assessed at a range of scales from site specific to across the State”<sup>b</sup>.

Linking monitoring outcomes to planning, and directly to park operations, encourages adaptable management and better decision-making. For example, staff noted that the VBMF supports the ranger’s ability to re-prioritise and react quickly to stochastic events such as bushfires and storms: “being able to tweak the strategies after a major event to get funding...seamless”<sup>a</sup>. “If that bushfire event happened and you didn’t have a framework to justify decisions, is there strength there to say that funds are being allocated appropriately?”<sup>b</sup>. With increasing bushfires and storm events predicted under a changing climate, the adaptive approach of VBMF is an important framework to begin dealing with those impacts and changes.

Providing a systematic process for ‘closing the loop’ has resulted in better governance and higher trust in the system for QPWS staff. Building trust amongst park staff and management builds commitment to management



Pathogen hygiene station on Lamington National Parks walking tracks © Sherri Tanner-McAllister

processes (Allen et al., 2019). During Lamington’s Green List process, a list of recommendations was provided by the assessors. As staff noted, “I think the [agency] acknowledged that but were able to take that on board and adjust our work programs and our head space around how we work”<sup>a</sup>. “The Green Listing forced us to push it all the way through and go all the way down to the action planning level, prioritisation and how to measure successes”<sup>b</sup>. Having that solid framework in place and substantial planning, as well as a public commitment to Green Listing helps provide a resilience to government changes and deliver long-term conservation outcomes.

### **Benefits for Queensland park management**

The primary benefit of undertaking the Green Listing process was that it contributed to a comprehensive benchmarking assessment of protected area management at the State level in Queensland, as well as at the regional level. Protected area agencies do not often take the time to evaluate management to this extent across the key pillars of management effectiveness. Strong and effective management can only occur with investment in all components of management effectiveness. This process highlighted that most of the limitations for QPWS were

because of a lack of good governance and investment in monitoring that could facilitate robust evaluation. Working through the Green Listing process to identify key gaps, and implement steps to rectify the gaps, has significantly improved QPWS’s management at Lamington. The assessment and benchmarking process is a very useful tool for park managers for continual improvement, even if there is no intent to formally apply for the Green List.

A secondary benefit was that it fast tracked the implementation of strategic planning and raised awareness of the overarching management goals for Lamington down to the operational work unit. It helped communicate connections from broad strategic planning to on-ground action plans and operational delivery. In the past there has been disconnect between strategic park management planning and operational work programme delivery. Connecting all rangers, at every level (not just senior operational staff), with strategic thinking has greatly improved their understanding of the park, their role as rangers and how their on-ground actions are contributing to strategic goals for Lamington. This increases staff connection to the park and improves job satisfaction. These lessons are applicable not only to Lamington, but across the region, State, agency, and throughout Australia and globally.



## Where to from here?

Lamington's journey through the Green List assessment was hugely beneficial to both the park and to Queensland's State-wide protected area management programme. The assessment process provided the driver to apply the VBMF. As noted by a staffer, "I think the Green Listing helped us further prioritise actions at Lamington [and] make some strong decisions that we might not have done without the attention of Green List and the involvement of our executives in the process"<sup>b</sup>. The Green List process also identified where QPWS can still improve implementation of the VBMF and effective park management. As noted by another staff member, "there's a big piece of work that we need to learn from the Green List and try and apply that more broadly across the State"<sup>c</sup>. There is a need to become more mature in communicating when things are not going well and to take responsibility to say management is not quite meeting the targets. This information needs to be available at executive level to inform strategic decisions and resourcing. As noted by one QPWS staffer, "we need a bit more maturity, intelligence, what does all of this look like long-term"<sup>c</sup>.

One of the areas for improvement is further developing and evaluating capacity to determine the extent to which the agency and individual protected areas have adequate staff with the skills, qualifications, knowledge, training and licences to deliver the park management plan. It is recognised that there is still an urgent need for development and changes in this area to improve management effectiveness (Allen et al., 2023; Nielsen, 2012; Porzecanski et al., 2022). Lamington's management and the VBMF need further refinement to understand current capacity to effectively manage, and to identify gaps. As one staff member asked, "strengthening elements such as field management capability – how do we evaluate it?"<sup>c</sup>, with another noting "we don't have any data, we don't have any tool that quantifies [field management capability] for us or any tools to help us assess it"<sup>b</sup>.

There needs to be a shift within the agency to become more at ease with having priorities identified by good planning driving the work and resourcing. There is a common phrase of 'under-promise, over-deliver' which is "the complete opposite of what VBMF is trying to achieve"<sup>b</sup>, said a staffer who also noted, "they're really not comfortable with setting high benchmarks"<sup>b</sup>. The agency needs to get comfortable with being accountable and transparent on where resources are going, why things are prioritised the way they are. As explained by a staffer "why didn't we deliver X, Y and Z – because we

didn't have this level of input that we needed, that's why the output only equates X"<sup>b</sup>, and "communicating when we're not doing well"<sup>b</sup>.

The Green List accreditation process for Lamington has been a journey of reflection and improvement. It provided the structure needed to deep dive into the VBMF and its implementation identified areas where the park, and the QPWS in general, are doing well, and areas for improvement. The Green List process has helped strengthen the agency's adoption of VBMF and improved conservation outcomes for Lamington National Park. The team involved in this process believes the experience of Lamington National Park and the QPWS can provide valuable lessons to other protected areas and conservation agencies contemplating the adoption of management effectiveness frameworks or considering assessing some of their parks and reserves for inclusion on the IUCN Green List.

## ACKNOWLEDGEMENTS

The authors would like to thank Susan Tilgner for her design work on Figure 1 and Damien Head (QPWS) for his review and feedback. We would also like to thank all the QPWS staff at Lamington National Park and in the South East Queensland Region for their efforts and support.

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## RESUMEN

El Gobierno de Queensland (Australia) está aplicando un enfoque basado en valores a la gestión de parques en todas las áreas protegidas del Estado, basándose en principios internacionales de gestión eficaz y equitativa. Para mostrar en la práctica el éxito de la gestión de los parques e identificar las áreas que requieren mejoras en el enfoque, el Gobierno de Queensland participa en el programa de la Lista Verde de la UICN. La nominación del Parque Nacional de Lamington, la primera área protegida del Patrimonio Mundial de Australia en ser evaluada, ha mostrado la importancia de vincular la planificación estratégica a las operaciones dentro del parque, las ventajas de trabajar en colaboración interna y externamente, la importancia de la capacidad para la gestión del parque y el establecimiento de objetivos e inversiones a largo plazo, formas eficaces de "cerrar la brecha" en la gestión adaptativa y el flujo de beneficios a otras áreas protegidas en todo el Estado.

## RÉSUMÉ

Le gouvernement du Queensland, en Australie, applique une approche de la gestion des parcs fondée sur des valeurs dans toutes les zones protégées de l'État, sur la base des principes internationaux de gestion efficace et équitable. Le gouvernement du Queensland participe au programme de la Liste verte de l'UICN afin de présenter une gestion réussie des parcs dans la pratique et d'identifier les domaines nécessitant une amélioration de l'approche. La nomination du parc national de Lamington, première zone protégée australienne inscrite au patrimoine mondial à être évaluée, a montré l'importance de lier la planification stratégique aux opérations dans le parc, les avantages de la collaboration interne et externe, l'importance de la capacité de gestion du parc et de l'établissement d'objectifs et d'investissements à long terme, les moyens efficaces de "combler le fossé" en matière de gestion adaptative et le flux de bénéfices vers d'autres zones protégées de l'État.