

# Golden Gate Highlands National Park: Killing the goose laying golden eggs? Comment on Taru et al. (2013)

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## KEYWORDS:

conservation; poverty alleviation; rural development; South Africa; sustainability; tourism

## HOW TO CITE:

Buschke FT, Seaman MT. Golden Gate Highlands National Park: Killing the goose laying golden eggs? Comment on Taru et al. (2013). *S Afr J Sci.* 2014;110(7/8), Art. #a0075, 2 pages. <http://dx.doi.org/10.1590/sajs.2014/a0075>

In their recent commentary published in the *South African Journal of Science*, Taru and colleagues<sup>1</sup> highlighted the possible shortcomings of the approved management plan<sup>2</sup> of Golden Gate Highlands National Park (GGHNP). Although they can be commended for their critical efforts to evaluate policies within an adaptive management framework, many of their concerns were grounded on fragile factual foundations. Consequently, despite their good intentions, their specific recommendations seem to be misconstrued. It is not necessarily our aim to defend the management plan of GGHNP, nor do we believe that it is faultless. Instead, in this brief essay, we will firstly highlight some of the factual inaccuracies in the evaluation by Taru and colleagues and, secondly, point out some considerations that were not plainly addressed in their original commentary.

Taru and colleagues pointed out flaws in the approved management plan of GGHNP but, unfortunately, many of their criticisms seem to contradict what is actually written in the document or what is happening on the ground (Table 1). While we acknowledge that they may have been questioning the *adequacy* of specific sections of the management plan, rather than highlighting their *absence*, Taru and colleagues did not make it clear where and how their opinions differed from what had already been addressed by the management plan. As such, it was difficult to gain an accurate picture of the reality at GGHNP based on their assessment.

**Table 1:** A list of criticisms made by Taru and colleagues<sup>1</sup>

Criticism	Reality
The management plan does not adequately consider that local communities are deprived by the absence of a local museum showcasing the palaeontological and cultural heritage of GGHNP.	This concern is addressed in Section 2 (page 2) of the management plan: 'A world-class interpretive centre that will tell the story of the African dinosaurs is in the planning stages'. Despite not yet having a museum, GGHNP has committed to environmental education in the region (Section 10.4.3.; pages 41–42), which currently involves more than 4000 individuals annually. <sup>9</sup>
With the exception of a few individuals who graze their livestock, local community members have not benefitted from activities within GGHNP.	In accordance with Section 17(j–k) of the South African <i>National Environmental Management: Protected Areas Act (NEMPA) Act 57 of 2003</i> , GGHNP is legally obligated to be a key contributor to the local economy and livelihoods of communities. This is covered in Section 10.4.4 (pages 43–45) of the management plan.
The management plan needs to address a socially oriented benefit sharing scheme to reduce the illegal harvesting of resources in GGHNP.	In line with Sections 17(g–h) and 41(2)(f) of NEMPA, the management plan addresses the importance of sustainable resource use in GGHNP (Section 10.2.3., pages 34–35). This section specifically emphasises the importance of a co-management approach with various stakeholders to enhance human well-being.
The public participation process used in the development of the management plan was 'not from a grassroots but an elitist level'.	Appendix 3 of the approved management plan outlines the multiple stages of the public consultation process. This process included representatives and members of the public from the local (Maluti-a-phofung) and district (Thabo Mafutsanyane) municipalities as well as the University of the Free State, amongst others.
The management plan does not adequately define combative measures against the illegal grazing of livestock within GGHNP.	The fact that livestock still graze in the most sensitive high-altitude grasslands, is because of a lack of enforcement and not a strategic oversight; Section 10.2.2.4 (page 33) of the management plan highlights the negative effects of livestock grazing on natural biota, and identifies actions and responsible parties for the removal of species from GGHNP.
The fire management policy requires revision and immediate research into the environmental consequences of fire.	Although a valid concern, this statement trivialises a widespread problem throughout the region by implying that veld fires are a result of the absence of research and lack of information. Nevertheless, Section 10.2.2.2. (pages 30–31) of the management plan addresses the fire management strategy of GGHNP, which includes the prevention, monitoring and fighting of fires. Staff currently monitor fire frequency and are actively involved in fighting uncontrolled fires (as many as 76 uncontrolled blazes annually <sup>9</sup> ).
The ability to maintain water quality and quantity is being jeopardised as the ecological integrity of the wetlands in GGHNP are being threatened by erosion and alien vegetation.	GGHNP aims to ensure that the park and its surrounds produce high-quality water. This is addressed in Section 10.2.1 (pages 27–28) of the management plan, which highlights the importance of flow regulation, wastewater management, the spread of alien invasive species and excessive erosion.
The management plan fails to demonstrate mechanisms of traffic control. Uncontrolled use of the R712 road through GGHNP – which is dominated by freight transport from Durban to Maseru (Lesotho) – is a missed opportunity for revenue collection.	Section 7 (page 19) of the management plan explains that access to the park via the R712 cannot be restricted as it is a public road. However, road signs at the intersection with the R711 near Clarens indicate that the road through GGHNP is not suitable for heavy freight vehicles. Moreover, the primary freight route from Durban to Maseru is along the N5 via Bethlehem, not through GGHNP.
The management plan does not stress the importance of developing a GIS database for the spatial locations of important geological and heritage features.	Section 10.4 (pages 38–40) of the management plan focuses on establishing the best ways to promote tourism through the proper management of geological and heritage features of GGHNP. These strategies include the updating of pre-existing databases.
Access to GGHNP should be restricted to visitors who check in at control points and pay for access permits.	Access to GGHNP is already limited in all zones except the high-intensity zone along the R712 road (Sections 6 and 7; pages 15–18). This control involves self-reporting at the Glen Reenen Rest Camp or the Golden Gate Hotel where an access permit is obtainable (the fee was ZAR36 per person in December 2013). Overnight visitors are also required to check-out on departure.
Fossilised eggs and foetal skeletons discovered in the park <sup>3,4</sup> were shipped away to distant museums; wasting an excellent learning opportunity in the region.	The removal of fossils without a permit is forbidden by Section 35 of the South African <i>National Heritage Resources Act 25 of 1999</i> . It is not possible to legally remove fossils anywhere in South Africa without informing the proper authorities. Scientists who have removed fossilised eggs followed the correct procedures and were granted permission by the South African government to do so.

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In their commentary, Taru and colleagues also called for the accelerated documentation of all the palaeontological<sup>3,4</sup>, geological<sup>5,6</sup> and cultural<sup>7</sup> features of GGHNP using geographic information systems (GIS) and suggested that this activity would promote tourism in the region. They went on to imply that the revenue generated by increased tourism could be used to accelerate social and economic development in the poverty-stricken QwaQwa region (Maluti-a-phofung local municipality). This implication is supposedly based on the view that the short-term generation of capital could act as a catalyst for secondary economic growth in the region, which, coincidentally, aligns with the views expressed on page 5 of the approved management plan. Unfortunately, this reasoning is based on incomplete evidence: neither the management plan nor Taru and colleagues' evaluation considered the continuous outflow of tourism-generated revenue from the region. In a preliminary appraisal of tourism in the town of Clarens within the Maluti-a-phofung local municipality, Atkinson<sup>8</sup> found that less than 5% of tourism-generated revenue was actually spent within the local municipality, while the greatest proportion of income was spent either in the adjacent Dihlabeng local municipality (37%) or in other cities and provinces (59%). This finding suggests that accelerated tourism will not necessarily alleviate poverty in the QwaQwa region. Moreover, the palaeontological, geological and cultural (i.e. rock art) features in GGHNP all degrade naturally<sup>5,6</sup> and increased human exposure will only accelerate this degradation. In this sense, these natural features should be viewed as a finite stock, rather than a sustainable generator of long-term revenue. Given that the revenue created by increased exploitation might just flow out of the region without uplifting local communities, the suggestion by Taru and colleagues is akin to the fable of the farmer who kills the goose that lays the golden eggs: they are potentially sacrificing a small, but steady income for the prospect of a large and immediate pay-off that may never materialise.

We recommend that GGHNP rather take a proactive role in poverty reduction by continuing, and perhaps expanding, their efforts in environmental education. Currently, more than 4000 individuals benefit from these educational programmes each year<sup>9</sup> and, according to the budget outlined in the management plan, these programmes require annual investments of ZAR1.45 million. Despite these costs, however, such efforts are invaluable in a region in which just one in four people over the age of 20 has completed secondary school education.<sup>10</sup> Moreover, environmental education was listed as the primary reason for visiting the park by inhabitants of QwaQwa and Clarens<sup>11</sup>, so this education-centred strategy could help build ties between park management and local communities. Whether our suggestions are in line with the long-term objectives of GGHNP or not, we feel confident that they are more sustainable than the fast-tracked exploitation recommended by Taru and colleagues. Their strategy is potentially damaging to the integrity of GGHNP and would not necessarily translate into modest, let alone sustainable, local economic growth. Instead, such an economic-centred view of natural resources as a source of capital could accelerate

environmental collapse and cause immeasurable harm to people in the long term.<sup>12</sup>

## Acknowledgements

We would like to thank John Butler-Adam, Earnest Daemane, Stefan Grab, Mohlamatsane Mokhatla, Lisa Mol, Robert Reisz and Philip Taru for their patience, advice and feedback during the preparation of this article.

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