

RESPONSE ARTICLE

# No Evidence-Based Restoration Without a Sound Evidence Base: A Reply to Guldemond et al.

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## Abstract

Evidence-based practice is not possible without an evidence base. Guldemond et al. confuse our attempt at assessing the status of the evidence base of restoration programs in South Africa with attempting to assess whether restoration is evidence-based. While we fully agree with them that there is a need to assess whether practitioners use evidence in their decision-making, we assert that use of evidence is the last step in the evidence-based approach. It is preceded by the generation (and documentation) of evidence

through baseline condition assessment, proper goal setting, sound monitoring of the impacts of the chosen intervention as well as effective dissemination of resulting evidence. To answer the question whether restoration is evidence-based would require the assessment of all stages from generation to use. We chose to start at the beginning, a logical place to start.

**Key words:** indicators, monitoring, restoration practitioners, systematic review.

We enjoyed reading the thought provoking comments raised by Guldemond et al. (2011) on reading our paper (Ntshotsho et al. 2011). They raise some important points about the complexity of assessing evidence-based practice and provide some useful insights into ways to take this work forward. These comments have helped us to clarify our thoughts and, in the spirit of moving the restoration community forward to evidence-based practice, we appreciate this opportunity to share our responses to their criticisms.

Guldemond et al. raise two major concerns with our study—the first being that we confuse “evidence-based” with “evidence base” and fail at assessing either. Their second concern is that we confuse individual restoration goals (especially socioeconomic goals) with restoration success.

The first concern is an important one—assessing evidence-based practice is not a simple task and would certainly require more than just this one study. As we highlight in our paper, proper evidence-based restoration would include (1) finding, (2) appraising, and (3) using evidence of restoration effectiveness—assessing this process will be no mean feat. But all of these stages require the presence of evidence. As Guldemond et al. point out, a thorough assessment would require both an assessment of the evidence base itself, as well as an

assessment of whether this evidence base is used. Restoration cannot be evidence-based if either one or the other is missing. So our study began with an assessment of the evidence base, as a first step to assessing whether restoration is evidence-based.

While we agree with Guldemond et al. on the need for a central and standard platform through which evidence can be disseminated, we do not agree with their opinion that systematic review of peer reviewed literature is the only way of assessing the evidence base. Their emphasis on systematic reviews ignores the fact that many restoration efforts never get peer reviewed or published (especially failed efforts), and what gets published in scientific journals is not necessarily read by practitioners and/or decision-makers, who have been shown to still rely on experience (Pullin et al. 2004; Cabin et al. 2010; Cook et al. 2010). We therefore decided to conduct our review of the evidence base focusing on the information the practitioners themselves gather and report on, complemented with interviews of the practitioners themselves. When complemented with systematic reviews already in existence (e.g. Aronson et al. 2010) we have a much better idea of the evidence base available. Moreover, the requirements of the systematic review method (Stewart et al. 2005) are such that, in the world of application, where time and financial resource constraints are a reality, few practitioners can afford to undertake systematic reviews before making decisions on how to restore.

Guldemond and colleagues’ second concern is that we confuse restoration goal achievement with successful restoration. In fact, we do not even attempt to assess success—either that of goals or programs. As outlined in our study, we merely assess what types of goals are set and report on the bias toward

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socioeconomic goals. We do not, as Guldemond et al. assert, associate the presence of these goals with restoration success. However, the authors might want to reconsider their assertion that it is only ecological goals that matter in determining success. Increasingly more research highlights that sustainable conservation programs require social, political, as well as ecological success to survive in the long term (Higgs 1997; Mathévet & Mauchamp 2005; Aronson et al. 2010). And so, while we pass no judgement on the bias of goals in our paper, we do not agree that it is only ecology that matters in restoration.

We thank Guldemond et al. for taking up this challenging topic and helping us think through these issues as we continue with our work. In fact, it seems there is a lot we agree on, and their closing line is in fact a summary of our long term goals: “[In] encouraging evidence-based restoration in South Africa we need to first assess whether restoration is evidence-based, and if not why not, and second to introduce or improve systems to evaluate the data collected in restoration programs and incorporate it into an evidence base available to and useful for decision makers.” Our study now moves on from examining the evidence base to explore these issues. And, in the interest of mainstreaming evidence-based practice into restoration, we hope to continue engaging in collegial, constructive debate.

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