



13.1.2018

Developing a behavioral evidence platform for conservation and management –

Workshop Report

Background

Successful conservation of biodiversity requires collective decision-making among multiple stakeholders with diverse viewpoints, but such collaboration is often hampered by poor communication among academic researchers, wildlife managers, and policy makers, limiting conservation progress and innovation. This is well exemplified in the field of behavioral ecology, where relatively few management schemes include behavior, thus reducing the efficiency of many conservation interventions, and in some cases leading them to failure. Behavior-based management programs are not going to be adopted unless managers can be provided with evidence that incorporating behavioral ecological principles and insights from behavioral studies improves outcomes or cost efficiency over existing methods. In this regard, the gold standard for unbiased, summarized evidence, are formal systematic reviews and meta-analyses where the literature is systematically and thoroughly searched and the weighted effect sizes are summarized and analyzed. These reviews bridge the gap between researchers and managers by presenting a comprehensive overview of all studies relating to a topic and identify specifically where and under what conditions an effect is present.

Activities and Outcomes of the workshop

We carried out a 4-day workshop at BGU (24-27 October 2017) involving 15 leading

behavioral biologists from eight different countries. The workshop comprised two main



goals. First, participants were given a step-by-step introduction to systematic reviewing and systematic mapping as methods for evidence synthesis. The participants gained an in-depth understanding of the activities that are necessary to maximize comprehensiveness, transparency, objectivity and reliability throughout the review process. This part took the form of a series of interactive presentations and practical exercises, including examples from recent relevant systematic review and map projects, and was led by Dr. Biljana Macura, a licensed systematic review instructor from the Mistra Council for Evidence-based Environmental Management (EviEM) at the Stockholm Environment Institute.

The second goal of the project was to enable participants to start developing the protocols for their own systematic reviews with the aid of Dr. Macura and under our mentorship. Importantly, all planned participants have committed to producing a systematic review. Thus, within two years of the workshop, we aim to have multiple systematic reviews published in the journal *Environmental Evidence* or in other peer-reviewed venues, each addressing a different application of an animal behavior question in conservation and management. The close to simultaneous publication of multiple systematic reviews, each advancing our knowledge of different aspects of the same general topic is unprecedented, and we expect it to have a long-lasting impact on the field and to improve conservation planning world-wide. To this end, we also produced an opinion-style paper to help foster the adoption of systematic reviews in the field.

Overall, the workshop was a great success. The interactions among the participants were very productive and on top of the systematic reviews all participants have agreed to produce, we have also prepared an opinion piece that has already been already invited as a commentary for one of the leading journals in our field, *Animal Behaviour*. In this paper





we discuss the importance and value of evidence-based synthesis and systematic reviews in the emerging field of conservation behaviour.

A handwritten signature in black ink, appearing to be 'Oded Berger-Tal'.

Dr. Oded Berger-Tal

Mendel Wasserman Career Development Chair in Desert Studies

Mitrani Department of Desert Ecology

Ben-Gurion University of the Negev

