

Towards a systematic conservation plan for the Arabian Peninsula

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Abstract. Geographical Information Systems (GIS) based systematic conservation planning can form the basis for prioritizing conservation actions in a strategic and efficient manner. However, to date in the Arabian Peninsula conservation plans have generally taken an *ad hoc* approach to prioritizing actions spatially. Previous Sharjah Conservation Workshops highlighted this gap in our understanding of the spatial patterns of biodiversity across the Arabian Peninsula, and in particular identified the need to specify areas where conservation priorities that cross-national boundaries exist, and which may be best addressed using a Transboundary Conservation Area (TBCA) approach. Therefore a GIS and systematic conservation planning workshop was held as part of the 2010 Conference on Biodiversity Conservation in the Arabian Peninsula in order to test the potential for conducting a rapid systematic conservation assessment for the Peninsula. This paper outlines the concept and benefits of systematic conservation planning, reports on the process, data analyses and initial outputs of the GIS and systematic conservation planning workshop, and charts the way forward for developing a more robust assessment for the Arabian Peninsula.

Key words. Systematic conservation planning, reserve expansion, threatened species, Geographical Information Systems, GIS.

Introduction

Geographical Information Systems (GIS) based systematic conservation planning can be used to prioritize conservation implementation strategically and efficiently. This planning process has been successfully applied and refined in areas and habitats as diverse as the Cape Floral Kingdom, grasslands, forests and succulent deserts of Southern Africa; the rainforest of the Amazon and Papua New Guinea; marine areas of California, South Africa and Australia; and freshwater systems in South Africa and the USA (MARGULES & PRESSEY 2000, PRESSEY & TAFFS 2001, DESMET et al. 2002, COWLING et al. 2003, NEL et al. 2007, KLEIN et al. 2008). However, systematic conservation planning processes have not been applied at regional scales in the Arabian Peninsula. As robust and tested methodologies now exist and best practice guidelines have been developed (BOTTRILL & PRESSEY in prep.; with sections currently available in PRESSEY & BOTTRILL 2009), the opportunity exists to utilize established methodologies within the framework of international best practice to quickly and efficiently undertake a systematic conservation assessment for the Arabian Peninsula.

Conservation within the Arabian Peninsula has focused to date on protecting iconic species such as the Arabian Oryx *Oryx leucoryx* and Arabian Leopard *Panthera pardus nimr*.