

## 9<sup>th</sup> Conservation Workshop for the Fauna of Arabia: Protected Area Systems in the Arabian Peninsula

### Short Report

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The Ninth Annual Conservation Workshop for the Fauna of Arabia was held at the Breeding Centre for Endangered Arabian Wildlife (BCEAW) in Sharjah, UAE, from the 3<sup>rd</sup> to the 5<sup>th</sup> of February 2008. This important regional forum is hosted by the Environment and Protected Areas Authority (EPAA) of the Government of Sharjah, under the patronage of His Highness Sheikh Dr Sultan bin Mohammed al Qassimi. The workshop series has grown in both scope and size since its inception in 2000, with a total of 84 registered delegates attending from seven countries in the Arabian Peninsula in 2008.

Workshops 1 to 7 assessed the conservation status of a range of regional taxonomic groups, from large mammalian carnivores, through to freshwater fishes. Last year the 8<sup>th</sup> Workshop focused for the first time on protected areas, following earlier workshop recommendations that the identification and protection of suitable habitats was of over-arching concern throughout the Arabian Peninsula. The interest generated by discussions in 2007 made it clear that protected area planning and management was an important unifying theme for species conservation in the region. The 9<sup>th</sup> Workshop in 2008 continued the focus on protected areas, while a series of parallel workshop sessions evaluated for the first time the status of the region's snakes to progress the taxonomic theme (see later this issue).

The general theme of the core workshop was the evaluation and development of protected areas networks in the countries of the Arabian Peninsula. Four core objectives were identified, each one forming a sub-theme for the workshop: (1) to review the current status of protected areas and protected area systems in the Arabian Peninsula; (2) to undertake a formal evaluation of protected area management effectiveness; (3) to identify priority sites for the development of Transfrontier Conservation Areas (TFCAs), and (4) to raise awareness of the implications of global climate on species conservation and protected area creation and management in the region.

#### **Review of regional protected area status**

It became apparent in the 2007 workshop that protected areas networks are well advanced in some countries within the Arabian Peninsula, while other countries are in the process of planning for protected area creation. Consequently there are now a number of high profile success stories, highlighting a variety of successful and often innovative approaches to protected area creation and management. But equally important, there are cases where the goals of an area or a network have not yet been achieved. This variation provides valuable opportunities to identify and to seek solutions for common problems. The first part of this process took place as a series of country reports, in which representatives were asked to review the status of protected areas in their country and to assess in general terms the degree to which protected area sites or networks were achieving their objectives. Reports were presented for Jordan, Saudi Arabia, Yemen, Oman, Kuwait, and for sites in UAE. Some common issues emerged, including the need for high-level political support and interagency involvements at all stages of protected creation and management; the value of making explicit linkages with appropriate and sustainable commercial activities; the importance of law enforcement; and the critical need to engage meaningfully with local communities.

#### **Evaluation of protected area management effectiveness**

This sub-theme sought to more specifically identify common limiting factors, obstacles and needs relating to protected areas in the region through the application of a formal tool to evaluate protected area management effectiveness. Following a general introduction to the IUCN WCPA (World Commission on Protected Areas) Evaluation Framework (Hockings et al., 2006) working groups applied the WWF Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) questionnaire (Ervin 2003) to selected sites throughout the

Arabian Peninsula. This evaluation tool has been implemented in over 20 countries and for more than 850 protected areas globally, and is currently the most widely applied approach for rapid assessment. In total 10 protected areas were evaluated by the delegates, comprising sites in Jordan, Saudi Arabia, Yemen, Oman, and UAE, thus providing excellent regional, institutional and ecosystem coverage. Some key points emerged from the analysis of the outputs of the questionnaire. Currently the region's protected areas face a number of environmental pressures, including overgrazing, wood-cutting, poaching, and other forms of unsustainable resource use. However, the future threats will come primarily from development that is incompatible with protected area conservation objectives. Such pressures include mining, unregulated nature-based tourism, urban sprawl, and infrastructural expansion, particularly of roads networks. In addition, while there is a strong focus on the biological components of areas, there has been much less attention paid to the socio-economic aspects of protected area management. As a consequence many reserves find themselves in unresolved conflict with local communities, and lacking the necessary information, understanding or mechanisms to engage locals in area management. Other problem areas include: lack of clear land tenure; lack of clear authority to prevent incompatible development in and around reserves being sanctioned by other land management agencies; the small size and lack of connectivity between sites, which tend to be isolated in the landscape, with barriers to the natural dispersal of animals.

### Prioritization of Transfrontier Conservation Areas

Cross-border cooperation emerged as an important theme in the 2007 workshop and the intention in 2008 was to keep this concept alive by identifying and prioritizing some key sites in which real progress could be made. In a series of open discussions and working group sessions delegates suggested three sites (Table 1) in which the ecological needs of high-profile charismatic species encompass key habitats and ecological processes, providing natural and ecologically meaningful cross-boundary linkages. For each site a number of vital attributes, such as the presence of globally significant wildlife populations, and their associated determinants and threats, were identified. Potential partner nation representatives were urged to use the workshop as an incentive to progress cross-border cooperation. It is strongly believed that with even only one high-profile Transfrontier Conservation Area as a successful model of regionally relevant cross-boundary arrangements, wider interest and support for the concept will be generated.

**Table 1.** Proposed priority sites for the development of Transfrontier Conservation Areas

Region	Partners	Focal species	Ecosystem
<b>Rub' al Khali</b>	UAE, KSA, Oman	Arabian oryx	Desert
<b>Arabian Gulf</b>	Kuwait, Bahrain, UAE, Qatar, KSA	Dugong	Marine
<b>Hawf region</b>	Yemen, Oman	Arabian leopard	Montane

### Overview of the implications of climate change predictions

The existence of a green-house effect due to anthropogenic emissions of greenhouse gases is now well-established scientifically, and is gaining wide acceptance as a fact in the public mind. As the predictive models of global climate change are refined, it has become apparent that under most scenarios there are significant climatic changes forecast for the Arabian Peninsula. Over the entire region temperatures will increase, extreme weather events will become more frequent, and for all but the southeastern areas, rainfall will decrease. Clearly, this will have major ramifications for already arid and hyper-arid regions, and major consequences for protected areas and the species they encompass. A rapidly increasing number of studies of wildlife responses to global warming indicate three types of effects could be anticipated: physiological, distributional, and phenological. Changes in the developmental rates of plants have the potential to radically alter plant community structure. Species will tend to move upwards and polewards as areas warm, with warming of an average of only 3°C being equivalent to 400km of latitude or 500m of altitude. However, barriers and the limited dispersal ability of some species may result in them being trapped in declining habitat, or facing increased competition from better adapted species, including exotic invaders. It was stressed that climate change needs to be considered for species reintroductions, where historical habitat may no longer be suitable; for the selection of sites for *in*

*situ* conservation, and for protected area creation. Protected area networks can enhance the natural resilience of species to climate change in four ways: through the protection of climate refugia, where favourable habitat will persist or develop as the climate changes; by conserving large-scale migration corridors; with the maintenance of viable populations to enable adaptation, with reserve networks that cover a diversity of habitats and gradients of climate; and in reducing threatening processes at the landscape level, by preventing land clearing and intensification of use next to reserve boundaries. To achieve this regionally there is a need for national policies on climate change to include protected area management and the coordination of threat management across land management agencies, and for increased regional coordination of responses that include Trans-boundary Protected Areas Systems Plans.

Plans are already underway for the 2009 meeting, where the intention is to mark the 10<sup>th</sup> anniversary of this important workshop series. Suggestions for themes or topics for guest speaker presentations are welcomed and should be sent to Jane Edmonds at email: [breeding@epaa-shj.gov.ae](mailto:breeding@epaa-shj.gov.ae)

### References

Ervin, J. (2003). *WWF: Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology*. WWF, Gland, Switzerland. 50pp.

Hockings, M., Stolton, S., Leverington, F., Dudley, N. and Courrau, J. (2006). *Evaluating effectiveness: a framework for assessing management effectiveness of protected areas. 2<sup>nd</sup> edition*. World Commission on Protected Areas Best Practice Protected Areas Guidelines Series No. 14. IUCN, Gland, Switzerland and Cambridge, UK. 105 pp.