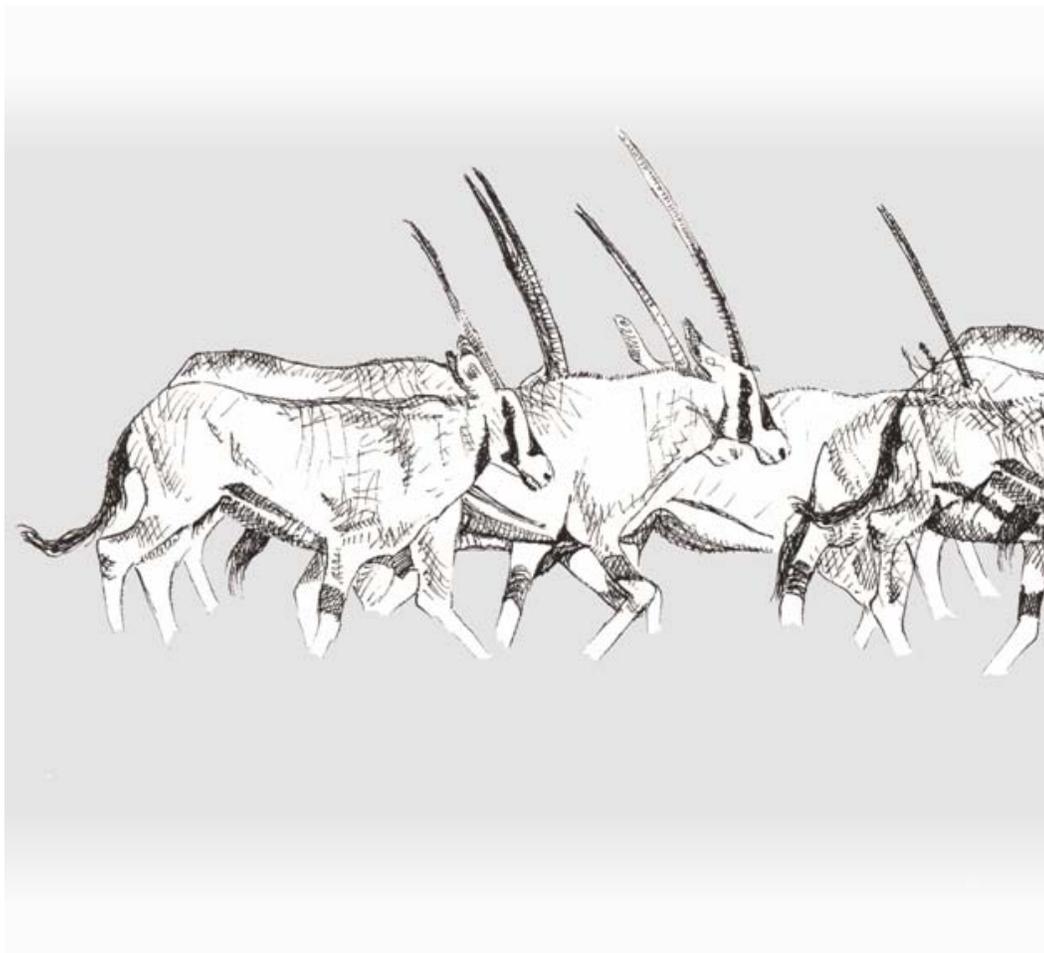




The Assessment of African Protected Areas

A characterisation of biodiversity value, ecosystems and threats to inform the effective allocation of conservation funding

A.J. Hartley, A. Nelson, P. Mayaux and J-M. Grégoire



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Summary

This is the first consistent, continent-wide assessment of protected areas in Africa, based on (i) their value for conservation and (ii) anthropogenic pressures. It is based on the most up-to-date, scientifically accepted, and publicly available information on species, environment and socio-economics. Over 1,600 species across 741 protected areas in 50 countries have been studied. This report presents a scaleable information system, meaning that the user can assess a given protected area in the context of others in the continent as a whole, in the same Ecoregion, same country, or same locality. Consequently, a variety of users are foreseen, from European policy makers, to regional and country level planners, and even managers of individual protected areas. This information is available online in a series of reports for each protected area and each country. Furthermore, to assist future EC funding decisions, we analyse the relationship between protected areas that have recently received EC assistance and our measures of conservation value and pressure.

Key findings

General observations

- We have developed a method to classify protected areas on two key indices (i) Biodiversity Value and (ii) Anthropogenic Pressure. Reducing the data down to two important and easily interpreted indices provides a valuable tool for users at all levels.
- For the 741 protected areas that were studied - the classification of the 144 'critical' protected areas that have higher Value and higher Pressure agrees very well with other broad scale internationally recognised conservation priority assessments such as Conservation International's (CI) Biodiversity Hotspots, and the World Wildlife Fund's (WWF) Global 200 Ecoregions, with overlaps of 75% and 71% respectively. This demonstrates that our classification is in agreement with existing broad-scale conservation knowledge.
- The classification of 'critical' protected areas also agrees very well with assessments of conservation priorities that are based on a scale which makes them amenable to management such as BirdLife International's Important Bird Areas (IBAs), with an overlap of 75%. This demonstrates that our classification is in agreement with existing management-scale conservation knowledge.
- Protected areas in our 'critical' class that overlap with many conservation priority assessments have higher Value and higher Pressure than protected areas that overlap with few or no initiatives. This demonstrates a high degree of consonance between major conservation priority assessments and our two indices of Value and Pressure, although the relationship is stronger for Value than for Pressure. We considered seven initiatives in total, the three mentioned in the previous points, and Ramsar wetlands of international importance, UNESCO World Heritage sites, UNESCO Biosphere Reserves and Alliance for Zero Extinction sites.
- Even though this analysis shows good general agreement with other conservation priority assessments, our approach goes further by providing more information, at a finer scale, on Value and Pressures at each protected area in the study.

Protected areas and EC biodiversity funding in Africa

- We have identified 96 protected areas that are receiving or have received EC funding. Of those protected areas, 68% have higher than average Biodiversity Value. Furthermore, 28% of EC funded protected areas have high Value & higher Pressure.
- The relationship between funding and our two indices varies from country to country, with countries like Ghana and Côte d'Ivoire having excellent targeting both in terms of Value and Pressure. In other countries such as Ethiopia targeting is closely related to Value but not Pressure, and finally several other countries where there is no discernable link between funding and either Value or Pressure.

- EC funded parks that overlap with several internationally recognised conservation priority assessments have higher Value and Pressure scores than those that do not.

Towards a shortlist of protected areas for future funding consideration

- We have identified a tentative shortlist of 106 'critical' protected areas in ACP countries that have not received EC assistance, but which could be taken into consideration in future funding proposals. It should be noted that the EC is not the only donor, and many of these protected areas are funded by other aid agencies. Cross-referencing these 'critical' protected areas with those funded by other donors will reduce this list further.
- A very high percentage of these overlap with broad scale, internationally recognised, assessments of conservation priority: 79 protected areas (75%) are in CI hotspots and 75 (71%) are in the WWF global 200 ecoregions. This demonstrates that our methodology is identifying a plausible set of important protected areas based on broad scale criteria.
- A very high percentage of these overlap with park scale assessments of conservation priorities, 77 protected areas (73%) are also BirdLife IBAs. This demonstrates that our methodology is identifying a plausible set of important protected areas based on management scale criteria.
- Within these 'critical' protected areas, those that belong to more than one conservation priority assessment have higher Value and higher Pressure scores, which suggests that the method can also be used to rank or prioritise 'critical' protected areas.
- Identifying (EC) unfunded parks that belong to several conservation priority assessments may be a good indicator for successful cooperation with other international agencies and hence a greater likelihood of sustainability and higher impact. Alternatively, critical parks that belong to few such schemes can be considered 'gaps' in our collective knowledge which could also be targeted.

Limitations of the method and data

General observations

- We have developed a continent wide and consistent methodology for assessing the value and pressures on protected areas across Africa. The assessment is based on quantifiable and objective measures using the most up to date and accurate information for Africa. We realise that the species and protected area information is of variable quality and this variation will inevitably affect the results. This was one of the key reasons for reducing our detailed data down to two key indices (Value and Pressure). As new data and better information become available we will integrate them into future assessments.
- The species data that we have used is the best available, but is still incomplete. We have included three taxa and will include more if and when continental or global assessments become available. Future versions of the assessment will include plant data which will affect our final assessment.
- There is concern that the species maps are sometime not accurate enough to be used in conjunction with small protected areas. We have tried various combinations of the species maps and found that our ranking of parks based on irreplaceability is robust to changes in the species maps. We will continue to assess this sensitivity with a multi-scale analysis of species irreplaceability from country down to protected area level. It will also contribute to the literature on potential gaps in the protected area network.
- To our knowledge, this is the first time that such a detailed assessment has been attempted on a continental scale. It is also the first time that an assessment of the pressures upon and value of protected areas have been linked to assistance. It would be extremely useful if we could include assistance from other major donors and agencies to produce a more complete picture of biodiversity related funding in Africa. This would probably reduce the shortlist of critical unfunded parks, and would be a valuable resource both for the international donor community and the European Commission.
- We were unable to locate any meaningful consistent information on the effectiveness of EC assistance to protected areas in Africa. Such information is difficult to acquire, subjective in nature, expensive and may not be factored into the project cycle. Furthermore, impact can often only be measured over a duration that is much longer than that of the funded project. This online resource, if maintained over a longer period, could be developed to assess the impact of conservation projects either on a park by park basis or from the impact assessments of regional initiatives (e.g. ECOFAC).
- This assessment measures *indicators* of biodiversity value and pressure on protected areas. We do not directly measure biodiversity or pressures such as hunting, or threats from invasive species. This is primarily because there is no consistent, continent wide method to do so. Nevertheless, we make the assumption that our general assessments of pressure do give an indication of other pressures. We note that some threats are not (and cannot) be taken into account, particularly those related to crisis situations, such as displacement of people by conflicts.
- The pressure scoring system, while robust in our estimation, remains uncalibrated. Assessments of recent land cover change within and around parks with different scores will enable a fuller assessment of how well this index describes pressure on parks. We also recognise that the effectiveness of park management will be a big factor in determining the actual pressure on protected areas.

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