



Agreement on the Conservation of Albatrosses and Petrels

Third Meeting of Advisory Committee

Valdivia, Chile, 19 – 22 June 2007

Measuring Threat Magnitude

**A Comparison of Existing Methods and
Recommendations for a Standard System**

**IUCN and Conservation Measures Partnership Working
Paper**

Measuring Threat Magnitude

**A Comparison of Existing Methods and
Recommendations for a Standard System**

**IUCN and Conservation Measures Partnership Working
Paper**

Summary of Proposed New System Only

Version: 05 June 2007

This is a draft document from an ongoing collaboration between IUCN and the Conservation Measures Partnership. The following proposed methodology for scoring the magnitude of threats has yet to be finalized and some details may change. Please do not circulate more widely without contacting Stuart Butchart (stuart.butchart@birdlife.org) or Nick Salafsky (Nick@FOSonline.org).

Annex 1. Summary of Proposed Threat Rating Methodology

This system is designed to be applied to assess the impact of a specific threat on given conservation target. We recommend that practitioners assess threats along specific criteria. In particular, we propose using a combination of *scope* (area) and *severity* (intensity) that when combined, provide an indication of the *magnitude* of the threat. We suggest specific four-point rating scales for each criterion that, where possible, are linked to specific percentages. Our proposed thresholds are designed to represent both ecologically and practically meaningful breakpoints between the categories.

The definitions for both scope and severity assess not only the current threat impacts, but also the anticipated threat impacts over the next decade or so, assuming the continuation of current conditions and trends (note that the ten-year time frame can be extended for some longer-term threats like global warming that need to be addressed today). As a result, the final threat magnitude measurement measures the *predicted* rather than the *actual* threat impact. While this may seem counter-intuitive at first, in most real-world conservation situations, a logging company planning to clearcut a currently completely intact piece of forest within five years should obviously be considered a high-magnitude threat.

Step 1. Rate Scope and Severity

Rate the scope and the severity of the threat on the target, using these definitions and rating scales:

Scope

The proportion of the *target* that can reasonably be expected to be *affected* by the threat within *ten years* given the continuation of *current circumstances and trends*. For ecosystems and ecological communities, measured as the proportion of the target's *occurrence*. For *species*, measured as the *proportion of the target's population*.

Very High: The threat is likely to be pervasive in its scope, affecting the target across all or most (71-100%) of its occurrence/population.

High: The threat is likely to be widespread in its scope, affecting the target across much (31-70%) of its occurrence/population.

Medium: The threat is likely to be restricted in its scope, affecting the target across some (11-30%) of its occurrence/population.

Low: The threat is likely to be very narrow in its scope, affecting the target across a small proportion (1-10%) of its occurrence/population.

Explanation

The *target* refers to the focal conservation target at the scale being assessed – in technical terms, the target occurrence within the defined project area (e.g., small site, landscape, or even global scale). *Affected* means subject to one or more stresses from the threat. The ten-year time frame can be extended for some longer-term threats like global warming that need to be addressed today. *Current circumstances and trends* include both existing as well as potential new threats. *Occurrence* for ecosystems is typically by area. *Species* includes both single species targets as well as multiple species guilds. If a species is evenly distributed, then the *proportion of the target's population* is the same as the proportion of the area occupied, but if it is patchily distributed, then it is not. In these cases, it is important to specify the unit of assessment for the target (e.g., breeding pairs vs. nests vs. individuals).

For both ecosystems and species, the proportion is estimated as the percentage of the target's occurrence at the scale being assessed (e.g. a threat from water pollution at a site is measured as the percentage of aquatic ecosystems affected, not the percentage of the area of the entire site).

Severity

Within the scope, the level of damage to the target from the threat that can reasonably be expected given the continuation of current circumstances and trends. For ecosystems and ecological communities, typically measured as the degree of *destruction or degradation* of the target within the scope. For species, usually measured as the *degree of reduction* of the target population within the scope.

Very High: Within the scope, the threat is likely to destroy or eliminate the target, or reduce its population by 71-100% within ten years or three generations.

High: Within the scope, the threat is likely to seriously degrade/reduce the target or reduce its population by 31-70% within ten years or three generations.

Medium: Within the scope, the threat is likely to moderately degrade/reduce the target or reduce its population by 11-30% within ten years or three generations.

Low: Within the scope, the threat is likely to only slightly degrade/reduce the target or reduce its population by 1-10% within ten years or three generations.

Explanation

Within the scope refers to both the spatial and temporal scope defined above. It is important to note that the severity rating is not made for the entire assessment area, but only within this scope. Thus, if the scope of a hunting threat only affects a sub-population of the overall species target, the severity assessment is only made in relation to that sub-population. For ecosystem targets, *destruction or degradation* is defined in reference to one or more key attributes of the target. Likewise, damage to species targets is most often defined in terms of the *degree of reduction* of the key attribute “population size.” In some cases it may be appropriate to consider other key attributes for species targets.

Step 2. Combine Scope and Severity to Get Overall Threat Magnitude

Combine the scope and the severity ratings to get the overall threat magnitude rating for that threat on that target using the following rule-based system:

		Scope			
		Very High	High	Medium	Low
Severity	Very High	Very High	High	Medium	Low
	High	High	High	Medium	Low
	Medium	Medium	Medium	Medium	Low
	Low	Low	Low	Low	Low