



# Endangered Species Recovery Metrics: Measuring changes in recovery status for better conservation decision- Fact Sheet

Project # 19-003

## Background:

Under the Endangered Species Act (ESA), no concise, standardized metrics exist for measuring changes in species recovery status. Rather, the changes are often evident only through species downlistings or delistings. These legal reclassifications, however, are too infrequent and coarse to capture incremental but important changes in recovery progress. A method to reward DoD for incremental recovery progress will provide installations with more regulatory flexibility based on conservation measures at the installations. This flexibility will lower the regulatory barriers to military mission activities.

## Objective:

Working with the U.S. Fish & Wildlife Service (FWS) and other conservation partners, we led the development and testing of recovery metrics to address the problems described above. The goal is for FWS to adopt the metrics as part of its future 5-year status reviews for all ESA-listed species.

## Summary of Approach:

The metrics assess recovery status using six factors:

1. The species' current levels of resiliency, redundancy, and representation (3Rs)
2. The changes in the species' 3Rs since its prior ESA status review
3. The anticipated future changes in the species' 3Rs
4. The changes in threats to the species since its prior ESA status review
5. The extent to which conservation measures for the species have been implemented and proven effective
6. The progress of the species' recovery planning efforts, including the number of downlisting / delisting criteria that have been achieved.

For each factor, the metrics provide several options for biologists to score a species' status. For example, the current levels of 3Rs can be scored as high, moderate, low, none, or unknown. Thus, the recovery metrics succinctly capture the most important information in a 5-year review using a standardized method that allows a person to compare the results across all listed species.

## Benefit:

Measuring incremental changes in recovery status is crucial for several reasons, including: (1) quantifying

the benefits of conservation funding, (2) determining how much to continue funding a species in the future, especially relative to other listed species with different recovery trajectories, (3) detecting whether a species continues to decline after listing and diverting resources to stop the decline, and (4) enabling more flexible approaches to complying with ESA protections for species that demonstrate recovery progress.

The fourth benefit is most relevant to DoD's mission. DoD's current ESA policy initiatives depend on tracking changes in species recovery status to inform options for managing the species flexibly under the ESA. The recovery metrics can provide that data, thus directly advancing DoD's goal of managing mission-priority species.

## Accomplishments:

We developed and tested a new set of metrics to track changes in recovery status. Specifically, over 75 biologists from FWS, academia, and conservation organizations tested the metrics on 50 listed species. Based on the result, we concluded that the metrics are (1) easy to apply, (2) generate consistent results about changes in recovery status, assuming a species has had an adequate 5-year review, and (3) capture all the main elements needed to assess changes in recovery status.

FWS is now evaluating how to potentially apply the metrics as part of future 5-year reviews. To improve the performance of the metrics, FWS should also ensure that its 5-year reviews contain adequate information on species recovery status and conservation measures.

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