

The Evolving Origins Of Species Under The ESA

Law360, New York (July 25, 2012) -- The listing or delisting of a species under the Endangered Species Act (ESA)[1] can have serious consequences. The law requires that actions authorized, funded or carried out by government agencies not be likely to jeopardize the listed species or result in critical habitat change.

The ESA also anticipates affirmative agency action as well as constrains private behavior by landowners in favor of encouraging species recovery and biodiversity. Listing of a particular species can impact both public works and public permitting processes, and the law also limits private action through its prohibition on the “taking” of any listed species. The “taking” prohibition can also include significant habitat modification or degradation that injures wildlife by significantly impairing a species’ essential behavioral patterns.

A December 2011 proposed interpretation was issued by the two primary federal agencies responsible for administration of the ESA — the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). It was intended to settle a contentious battle over the interpretation of one of the ESA’s integral clauses relating to the listing threshold, defining a species as endangered with reference to “all or a significant portion of [a species’] range.”[2]

This new interpretation imposes a “higher bar” by requiring a demonstration that a species is endangered in a portion of its range that is “so important to the continued existence of a species that threats to the species in that area can have the effect of threatening the viability of the species as a whole.”

In January 2012, 89 conservation groups signed on to comments opposing the joint interpretation.[3] In condemning the “higher bar,” environmentalists are arguing for the broadest application of the ESA.

Interestingly, however, environmentalists, in taking this position, have largely overlooked potentially important benefits for protection of truly imperiled species that in the face of climate change and altered habitats may, through adaptive migration, find suitable territory outside of their contemporary range. The range expansions are not expressly addressed by the proposed interpretation but the test it’s establishing could be argued to accommodate them.

“Significant Portion of Its Range”

The ESA’s text defines a species as endangered or threatened by reference to the danger of extinction in “all or a significant portion of [its] range” (called the SPR or SPOIR clause).[4]

In an attempt to resolve disparate agency and court interpretations over when a portion of a species range is “significant” under the ESA, the proposed interpretation rejects the U.S. Court of Appeals for the Ninth Circuit’s broader view that the ESA applies to any portion of a species habitat “in which [the species] is no longer viable but once was.”[5]

Instead, the joint interpretation would more narrowly define a portion of the species’ range as significant if its “contribution to the viability of the species is so important that without that portion, the species would be in danger of extinction.” This language closely tracks the interpretation approved in *Center for Biological Diversity v. Norton*[6], which found that the SPR clause meant only that the portion of the species’ habitat that is “so important to the continued existence of a species that threats to the species in that area can have the effect of threatening the viability of the species as a whole.”[7]

Thus, in considering the significance of portions of a species’ range for this assessment, the joint interpretation proposed by the FWS and the NMFS focuses on the importance of that area to the species’ overall survival, rather than on the boundaries of a presupposed geographical area.

As a result, a species will not be considered endangered in large portions of its range, if the species remains viable outside those portions. Only where the particular habitat is essential to the species’ survival will it be considered significant under the ESA.

The joint interpretation specifies that in proposing “a more specific and stringent standard to evaluate whether a portion of a species’ range would be considered ‘significant,’” its intent was to “ensure that the species being evaluated for ESA protection are truly in need of conservation.” [8]

Environmentalists have countered that this “higher bar” will limit federal protection for some species and lead to delisting of others. [9] The FWS responds that a narrow interpretation allows resources to be redirected to the species most in need of protection, and frees up needed funds to focus in other critical areas.

This dialogue overlooks the consideration of range shifts over time, in response to climate change or habitat alteration. The focus on the significance of a range to the overall species may provide a basis for the legal protection of adaptive range shifts — an issue of biological concern that law and policy can fail to incorporate. Thus, greater flexibility may, in fact, be provided by the joint interpretation than by the “lower bar” of taking into account the entire range.

Range Adaptation under the Proposed Interpretation

One of the surest laws of nature is that everything changes. Yet natural resources management law and policy is predicated on a static view that fails to adequately contemplate — and account for — ecological adaptations to climate change and other adaptive responses to human intervention.

For example, species undergoing re-colonization and geographic adaptation may be classified as “invaders” when the act is not one of biological belligerence, but healthy adaptation of the environment to changed conditions.

Range adaptation has real but contradictory consequences under the ESA. When the range and population of a species contracts, the ESA's protections may impose additional burdens on land use in the geographic area.

Yet when the range expands, the migrating species may find themselves effectively designated as aggressors in terms of some other species' natural “range.” When the range expands, the “invading” species may cause unforeseen interactions in their new (or newly reclaimed) territory.

For example, Canadian agencies have turned to snares to kill coyotes said to be threatening caribou on Newfoundland's south coast as a result of coyotes' natural range extension.[10] Coyotes have steadily moved eastward[11], and their natural range now includes most of the North American continent.[12]

Moreover, when both the invading species and competitive resident species in the new zone are threatened or endangered, even more complex conflicts may arise as policymakers sort out which side to support.

Acting the part of the arbiter of the species becomes even more complex because range expansion may also be an adaptive precursor to a species' wholesale range shift. The biological need for geographic range shift arises when historical habitats are altered by human activity or natural processes.

Climate change could gradually render historically suitable habitats unsuitable for sensitive species. This raises the potential for extinction pressure. The Intergovernmental Panel on Climate Change's Fourth Assessment Report, for example, has modeled significant extinctions from temperature increases of between 1.5-3.5 °C (relative to 1980-1999).[13],[14]

While predictions of widespread extinctions may be subject to dispute, climate change will inevitably affect the range of some species. One group of researchers has found climate change “is driving species toward higher latitudes at an average of nearly twice the pace that studies indicated in 2003” in attempts to follow food sources or react to traditional temperature or precipitation regimes that are growing hostile to their biological tailoring.[15]

For example, mountaintop-dwelling pikas, which historically lived at an elevation of 5,700 feet, have shifted an additional 2,000 feet higher. But there is reportedly a limit to their ability to adapt due to lack of pathways.[16] Many plant species, along with low-motility animals such as earthworms and snails, will be unable to migrate to alternate habitats.

But what of those species that can seek out and adapt to alternate habitats? Protection under the ESA may depend more on ecological homesteading than biology, but the de-emphasis on historical geographic range under the joint interpretation may benefit species in cases of range expansion or shift.

The interpretation is neutral regarding where species should be located, instead focusing on where they may currently be found. As long as a species has already begun adaptive range shift — and may currently be found in more suitable territory — it does not matter how long the species has been established in the area or whether it is considered a “native” species.

The proposed interpretation arguably moves from a system of geographical entitlements under the ESA to one of natural realities. By focusing on extinction in historical areas while neglecting newly colonized areas, current law disfavors range shift.

However, a species’ survival is not necessarily determined by whether it has ancestral or historical claims to a geographical plot. There is room for the law — and conservation — to evolve to adapt to the realities of a changing landscape.

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[1] 16 U.S.C. § 1531 et seq. (1973).

[2] New Policy to Improve Endangered Species Act Implementation, U.S. Fish and Wildlife Service, Dec. 7, 2011, www.fws.gov/...ESA/SPR_draft_policy_FAQs_FINAL_12-7-11.pdf.

[3] Letter from Center for Biological Diversity to Tina Campbell, Chief, Division of Policy and Directives Management, U.S. Fish and Wildlife Service, March 8, 2012, www.biologicaldiversity.org/programs/biodiversity/endangered_species_act/pdfs/Group_Comments_SPOIR_Policy.pdf.

[4] 16 U.S.C. § 1531 et seq.

[5] *Defenders of Wildlife v. Norton*, 258 F.3d 1136, 1145 (9th Cir. 2001).

[6] 411 F. Supp. 2d 1271, 1278-80 (D.N.M. 2005).

[7] *Id.*

[8] New Policy to Improve Endangered Species Act Implementation, U.S. Fish and Wildlife Service, Dec. 7, 2011, www.fws.gov/...ESA/SPR_draft_policy_FAQs_FINAL_12-7-11.pdf.

[9] *Feds, Conservationists Clash Over Endangered Species Act Definition*, Environment News Service, March 12, 2012, www.ens-newswire.com/ens/mar2012/2012-03-12-091.html; Letter from Center for Biological Diversity to Tina Campbell, Chief, Division of Policy and Directives Management, U.S. Fish and Wildlife Service, March 8, 2012,

www.biologicaldiversity.org/programs/biodiversity/endangered_species_act/pdfs/Group_Comments_SPOIR_Policy.pdf.

[10] Snares Set for Coyotes to Protect Caribou, CBC NEWS, Apr. 22, 2012, www.cbc.ca/news/canada/newfoundland-labrador/story/2012/04/22/nl-coyote-snares-caribou-422.html.

[11] Robert Winkler, Coyotes Now at Home in Eastern US, NAT'L GEOGRAPHIC, Aug. 6, 2002 news.nationalgeographic.com/news/2002/08/0806_020806_coyote.html.

[12] Coyote Fact Sheet, Georgia Dep't of Natural Resources, georgiawildlife.com/node/1391.

[13] One in 10 Species Could Face Extinction: Decline in Species Shows Climate Change Warnings Not Exaggerated, Research Finds, SCIENCEDAILY, July 11, 2011, www.sciencedaily.com/releases/2011/07/110711151457.htm.

[14] IPCC FOURTH ASSESSMENT REPORT: CLIMATE CHANGE 2007 (AR4), available at ipccinfo.com/wg4report.php.

[15] Pete Spotts, Climate Change: Species Climbing Higher and Migrating North, Study Says, CHRISTIAN SCIENCE MONITOR, Aug. 19, 2011, www.csmonitor.com/Science/2011/0819/Climate-change-Species-climbing-higher-and-migrating-north-study-says.

[16] Carl Zimmer, As Climate Warms, Species May Need to Migrate or Perish, Yale: Environment 360, Apr. 20, 2009, e360.yale.edu/feature/as_climate_warms_species_may_need_to_migrate_or_perish/2142/.

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