

# Comment on Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future

by Donald C. Baur

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Over the 35 years of its existence, the Endangered Species Act (ESA)<sup>1</sup> has given rise to a unique lexicon of buzzwords, catch-phrases, and terms-of-art. The depth and creativity of this vocabulary is not surprising, given the complex nature of the ESA's requirements and the pervasive effect they have had on wildlife conservation and the management and use of natural resources throughout the world.

The ESA, we have heard time and time again, is "the pit bull of environmental laws." Depending on the commentator's perspective, the "pit bull" needs to be either "defanged" and sent to "obedience school" or "unleashed" and trained to go for the "jugular vein" of resource development activities. The ESA is regarded by some as a "safety net" for species in the "intensive care unit" and by others as a place where species go to "check in but never check out." Nonfederal landowners entering into contractual habitat conservation plans are entitled to "no surprises" commitments from the federal government, just as landowners seeking to do good things for listed species without fear of regulatory penalties can obtain "safe harbor." Secretary Babbitt had his "five-point plan" for landowner incentives, while Secretary Norton sought to advance "the four C's", and Secretary Kempthorne lauded the "cooperative conservation" approach to ESA implementation.

In his article *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, Prof. J.B. Ruhl has added another entry to the ESA edition of *Words and Phrases*. Ruhl begins his excellent and timely article about the effects of global warming on listed species and how the

ESA does, and does not, address the problem by informing the reader: "The pika is toast."<sup>2</sup>

The pika, Ruhl explains, is a "tiny rabbit-like species [that] has the unfortunate trait of being remarkably well-adapted to the cold, high-altitude, montane habitat of the Sierra Nevada and Rocky Mountain ranges in the North American Great Basin."<sup>3</sup> The pika is confronting a threat to its survival because global warming is reducing its available habitat. The species has, as a result, become symbolic of the fate of many other species potentially affected by global warming caused by greenhouse gas emissions (GHG). If the pika is "toast" because of climate change, so are many other species.<sup>4</sup>

As Ruhl describes the dilemma, many species already are experiencing, or will soon encounter, three levels of adverse effects related to climate change. The most significant threat is from primary ecological effects:

[T]he ecological conditions it [the pika and other species dependent on colder climate habitat] needs for survival do not exist below a particular temperature regime. They do not have the option of relocating once the temperature regime lifts above the peaks [or alters the habitat of other species] which they now call home. Rather, the pika and other species with specific ecological needs and limited migration capacity are likely to face significant threats from this kind of first order change in ecological conditions. Threats in this

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1. 16 U.S.C. §§1531-1544, ELR STAT. ESA §§2-18.

2. J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No Analog Future*, 39 ELR (ENVTL. L. & POL'Y ANN. REV.) 10735 (Aug. 2009) (a longer version of this Article was originally published at 88 B.U. L. REV. 1 (2008)).

3. *Id.*

4. The other species most frequently mentioned as being potentially at risk from climate change are: arctic fox, Ashy storm petrel, bearded seal, bowhead whale, Cook Inlet beluga whale, Caribbean coral, Kittlitz's murrelet, Pacific walrus, penguins, polar bear, ribbon seal, ringed seal, spectacled eider, spotted seal, Steller's eider, and yellow-billed loon. The Center for Biological Diversity, a strong proponent of ESA listing of climate change-affected species, states: "Very few species will escape the burn of climate change. A landmark study surveying 20 percent of the Earth's land area offered a stark prediction: 35 percent of the species will be committed to extinction by the year 2050 if greenhouse gas emission trends continue." Center for Biological Diversity, Climate Law Institute, at [http://www.biologicaldiversity.org/programs/climate-law\\_institute/index.html](http://www.biologicaldiversity.org/programs/climate-law_institute/index.html) (last visited Feb. 2, 2009).

category will come from stranding, life-stage habitat loss, and altered biological events.<sup>5</sup>

Added to these first order threats are the secondary ecological effects of increased stress, successful adaptive migration, and opportunistic invasion, all of which add to the cumulative effect of “ecological disruption and species reshuffling.”<sup>6</sup> Finally, the survival of these species will be further complicated by a third category of effects: human adaptation to an increasingly warmer planet, such as direct habitat conversion, degraded ecological conditions, and induced invasion.<sup>7</sup>

These problems create a clear need to bring climate-threatened species under “the protective wings” of the ESA,<sup>8</sup> but the challenge is that the ESA has taken a species-specific approach that is effective only when dealing with straightforward causal connections between human-caused threats and species threats. What can the ESA do for the pika and similarly situated species, Ruhl asks, when the threat to survival comes from “all anthropogenic sources of greenhouse gases throughout the planet, from a small farm to a sprawling refinery” in ways that are “gradual and largely invisible to human perception.”<sup>9</sup>

Recognizing this problem inherent in the ESA, Ruhl provides a much-needed dissection of what the ESA can, and cannot, be expected to do. He effectively breaks the Act down into its key components, and looks at each through the lens of climate change effects on wildlife. For this purpose, Ruhl uses six key “policy choice pressure points” and relates ESA requirements to each one. In taking on this task, he correctly acknowledges that his proposal “is unlikely to satisfy strong supporters of the ESA” (because he disclaims any realistic ability of the Act to control GHG) “or its strong critics” (who will oppose Ruhl’s recommendation for extensive listings and use of the law to regulate habitat loss). As is often the case, by potentially alienating both ends of the ESA advocacy spectrum, Ruhl has come up with a commonsense, pragmatic prescription for deploying the action-forcing provisions of the ESA to their most effective use in assisting listed species in surviving the effects of climate change.

The first policy choice is for *identifying and listing climate-threatened species*. Ruhl calls for aggressive and early identification of species threatened by climate change, which brings the ESA’s listing and critical habitat designation requirements of §4 into play.<sup>10</sup>

It is hard to argue with this objective. Indeed, the listing process is already immersed in numerous petitions and law-

suits for the failure of the Services to list species affected by climate change, the most prominent of which was the May 14, 2008, decision to list the polar bear as a threatened species.<sup>11</sup> Pursuing Ruhl’s prescription of an aggressive listing program should not equate, however, with lowered standards or more permissive standards, merely because there may be a climate change-connection with a species’ status. The Services need to develop standardized guidelines and principles for reviewing listing prospects when climate change is a factor, instead of the largely ad hoc approach currently utilized. With such guiding principles in place, the Services should give priority to these species and make the appropriate decisions.<sup>12</sup>

The second policy choice involves *whether the ESA should be used to regulate GHG*. Ruhl is again correct in concluding that the agencies “should not attempt to use [their] §7 and §9 regulatory programs in an effort to regulate greenhouse gas emissions.” Section 7 sets forth the prohibition on jeopardizing the future existence of listed species or adversely modifying critical habitat as determined through consultation between the appropriate Service and the federal action agency,<sup>13</sup> while section 9 prohibits the taking (i.e., killing, injuring, harassing or harming—causing death or injury by habitat modification) of endangered species.<sup>14</sup> Other legal experts on the ESA agree with Ruhl in this regard. As John Kostyack and Dan Rohlf have observed, such a use of the ESA is difficult to square with any legal doctrine and is beyond the current scientific capability of the Services.<sup>15</sup> A full-blown section 7 review of anything but a tiny subset of the federal actions implicated in such emissions would divert agency resources or require a vast expansion of budgets. Regulating GHG, Ruhl, Kostyack, and Rohlf agree, should be the task of other laws, including hoped-for new legislation.

On the subject of section 7 applicability, a word needs to be said about controversial recent amendments to the ESA regulations published in the waning days of the Bush

5. Ruhl, *supra* note 2, at 10738.

6. *Id.*

7. *Id.*

8. *Id.* at 10736.

9. *Id.* at 10736.

10. 16 U.S.C. §1533. ESA implementation is vested in two agencies. Terrestrial species are under the jurisdiction of the U.S. Fish and Wildlife Service (FWS) in the Department of the Interior while marine species are under the authority of the National Marine Fisheries Service (NMFS) in the Department of Commerce.

11. Determination of Threatened Status for the Polar Bear (*Ursus maritimus*) Throughout Its Range: Final Rule, 73 Fed. Reg. 28211, 28212 (May 15, 2008) (to be codified at 50 C.F.R. pt. 17). The listing decision was accompanied by an interim final rule published under §4(d) of the ESA to declare that the listing would not lead to any regulation of GHG and that the provisions of the Marine Mammal Protection Act were, according to FWS, more stringent than the ESA and would supersede the latter. Determination of Threatened Status for the Polar Bear, 73 Fed. Reg. at 28306.

12. On January 16, 2009, Interior Solicitor David Bernhardt issued a formal legal opinion that sets guiding legal principles for determining when a species may be threatened with extinction in “the foreseeable future,” which is a requirement for listing in §4(a)(1) of the Act. Memorandum from Interior Solicitor to Acting Director, FWS, Opinion M-37021 (Jan. 16, 2009).

13. 16 U.S.C. §1536(a)(2), ELR STAT. ESA §7.

14. *Id.* at §1538(a)(1) (extended by regulation to most threatened species).

15. John Kostyack & Dan Rohlf, *Conserving Endangered Species in an Era of Global Warming—A Conservative Perspective*, in DONALD C. BAUR & WILLIAM R. IRVIN, *ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* (2002) (2d ed. forthcoming). See also John Kostyack & Dan Rohlf, *Conserving Endangered Species in an Era of Global Warming*, 38 ELR 10203 (Apr. 2008), a set of detailed recommendations for implementation by the ESA to address climate change effects.

Administration.<sup>16</sup> One feature of these regulations is to exempt impacts related to global processes, such as climate change, from section 7 consultation and the jeopardy/adverse modification prohibition. Along the same lines, the regulations exempt impacts that are “not capable of being measured or detected in a manner that permits meaningful evaluation.”<sup>17</sup> Both of these changes are aimed at precluding the review of GHG and the effects of climate change on listed species from section 7 consultation. It is the case that virtually all such sources of GHG and related effects will not raise to a level that *triggers section 7 consultation*.<sup>18</sup> Nonetheless, the legal validity and efficacy of precluding all consultation through an across-the-board rule change is questionable. Not surprisingly, environmental groups, as well as the state of California, challenged the rule as soon as it was published. A more appropriate approach to applying section 7 to GHG would be to extend the best available science under the pre-existing ESA rules to pending federal actions for purposes of determining whether a “may affect” situation exists. This use of the best available science would lead, before long, to established scientific precedent supporting fact-based determinations that GHG are not the basis for § 7(a)(2) application.

The third ESA policy area Ruhl identifies is *regulation of non-climate effects to protect climate-threatened species*. In this case, Ruhl urges aggressive use of section 7 and section 9 when doing so “will help carry the species through the climate change transition.”<sup>19</sup> Under Ruhl’s strategy, this is the area where the regulatory consequences of climate change under the ESA are most likely to be felt by development activities. The reach of the ESA in this regard is currently being felt in the California Bay-Delta where reduced water supply arguably caused by climate change is, for example, creating an even greater threat for the already endangered Delta smelt, leading to severe section 7 limitations on California’s water supply systems.<sup>20</sup>

Ruhl correctly observes that this policy area calls for “innovative approaches . . . such as market-based incentives and regional planning efforts. . . .”<sup>21</sup> Finding creative ways to apply the ESA is especially important in this policy area because there often will be no relationship between the cause of underlying climate-related threats (e.g., these activities are not the source of GHG or the carbon fuel resources that generate them) and the development activity that will bear the regulatory burden. In the Delta smelt situation, for example, reduced flows attributed to climate change are not caused by water supply entities, yet they are the parties being affected by tough ESA restrictions on their water transfer activities in

effort to keep more water available for the fish. This absence of a direct cause and effect relationship makes enforcement more difficult, as a legal matter, and more subject to abuse. With no other ESA regulatory targets available, there may be a temptation to place too much of the burden on the parties whose activities impact the climate-change threatened species. Ruhl anticipates this problem by recognizing that, again, “innovative approaches will be needed, such as market-based incentives and regional planning efforts, to facilitate human adaptation measures as much as species can tolerate.”<sup>22</sup> As the Delta smelt situation demonstrates, thus far it has been litigation, not creative and cooperative management response, that is driving the ESA response to climate change in this policy area.

The fourth policy area listed by Ruhl, *designing conservation and recovery initiatives*, falls within one of the most underused aspects of the ESA. Ruhl suggests that little time should be devoted to species that are unlikely to survive climate change; instead, such efforts ought to be focused on species that have a chance for survival. While this proposition has surface appeal, and may at some point in the future be a realistic avenue to pursue, right now and for the foreseeable future it is highly speculative to differentiate among climate change-threatened species in this manner. All species currently considered climate change-affected deserve meaningful recovery plans and conservation programs, and they should be developed on a priority basis.

Ruhl’s final two policy areas—*species trade offs and dealing with the doomed*—also anticipate continuing climate deterioration that will give rise to calamitous situations where some species will not survive and in which federal officials will have to make choices over which species to conserve when promoting the well-being of one cannot be achieved without harming the other. Ruhl argues for a utilitarian approach in these cases, trying to avoid the conflicts wherever possible, but when it is not, applying “default priorities, such as assisting top-level predators.”

Ruhl is correct to offer ideas on how to deal with these situations. The likelihood of them arising with frequency is, however, uncertain. Should these situations arise, they will present some of the hardest choices ever made under the ESA. Such a judgment call entails a deliberate decision by the federal government to allow a particular species to blink out. Such a decision is unlikely to be addressed by applying the preconceived or standardized default judgments. As a legal matter, coming to a conclusion about whether and how to allow a species to become extinct will almost certainly be the grist for intensive public debate, legal dispute, and possible application of the exemption process under the Endangered Species Committee.<sup>23</sup>

The prescriptions for adapting ESA implementation to the climate change era offered by Ruhl make considerable sense, but are they practical and achievable? Is it possible to drag

16. Interagency Cooperation Under the Endangered Species Act, 73 Fed. Reg. 76272 (Dec. 1, 2008) (to be codified at 50 C.F.R. pt. 402.03(b)(3)).

17. *Id.*

18. Section 7 consultation is triggered by a “may affect” finding. 50 C.F.R. §402.14. Individual sources of GHG will be such small, incremental, and untraceable contributors to global warming as in impacting a particular species that it will be almost impossible for those effects of the federal action leading to those emissions to meet this threshold finding.

19. Ruhl, *supra* note 2, at 10743.

20. National Resources Defense Council v. Kempthorne, No. 1:05-CV-01207, 2008 WL 5054115 (E.D. Cal. 2009).

21. Ruhl, *supra* note 2, at 10743.

22. Ruhl, *supra* note 2, at 10743.

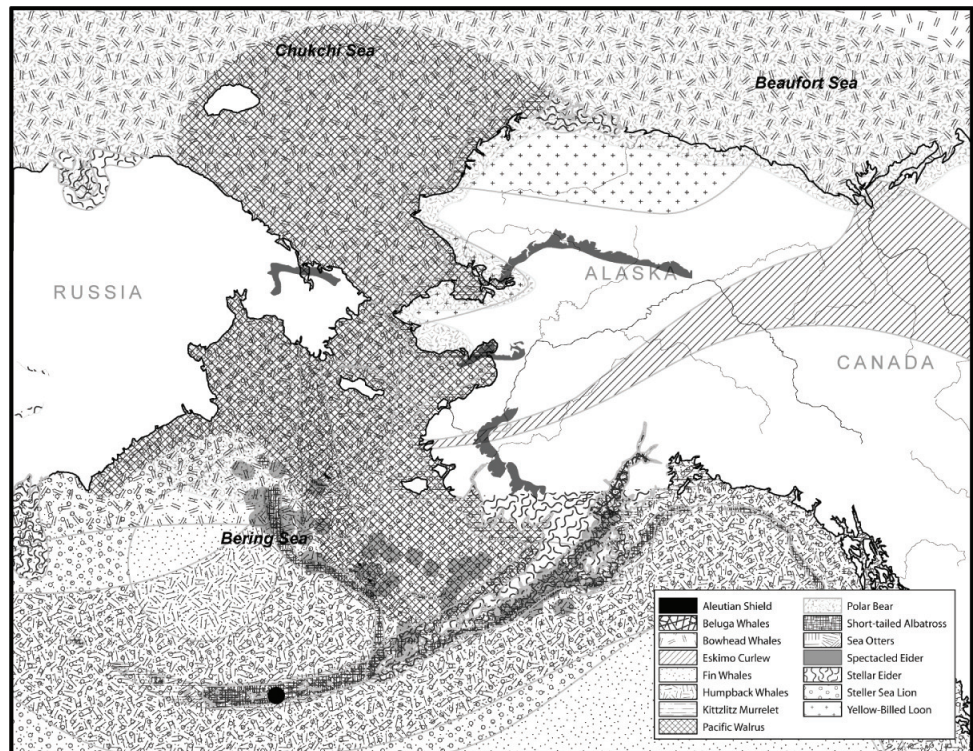
23. Section 7(e) establishes the Endangered Species Committee, often called the “God Squad,” to make determinations of when federal actions causing jeopardy should proceed despite their consequences for the listed species. 16 U.S.C. §1536(e), ELR STAT. ESA §7(e).



the massive federal bureaucracies charged with administering the ESA across Ruhl's "bridge to the no analog future"? Even if the agencies are willing and able to make this journey, will they do so when confronted by the shortage of funds and the unrelenting challenge of an extensive litigation docket, much of which is driven by time-consuming, staff-intensive violations of listing and critical habitat designation duties?

In *No Analog Future*, Ruhl lays out very helpful general guidelines for making climate change-related decisions under the ESA. The next step is to identify the specific administrative steps necessary to carry them out. The initial challenge is to reorient the thinking within the Services away from single-species approaches. Even in areas where a host of climate change ESA issues are already occurring, such as Alaska, the two Services continue to address listing, critical habitat designation, recovery planning, and action agency decisionmaking on a species-by-species basis. This pattern continues despite the overlapping habitat ranges and common global warming-caused threats that link many of the affected species together. As a map showing the ranges of species in Alaska that are listed, proposed for listing, candidates for listing, or subject to listing petitions demonstrates,<sup>24</sup> the entire offshore and coastal zone of Alaska is habitat for these species.

Because climate change effects on listed species will often be similar in nature and apply to identifiable geographical areas—the arctic, cold and high-altitude mountain ranges, watersheds in arid states, low-lying coastal areas subject to sea-level rise, etc.—the priority effort by the Services should be to apply ecosystem-based approaches to Ruhl's policy areas for: (1) listing; (2) recovery; and (3) regulation of non-climate effects, especially by means of the application of innovative measures. Precedent already exists for ecosystem-based listing from October 21, 2008, when the Bush Administration proposed to list simultaneously 48 species (mostly plants) in a specific location in Hawaii based on common habitat threats. The proposal also would designate 27,600 acres of critical habitat.<sup>25</sup> Ecosystem approaches also have been used to regulate activities in specific areas under combined legal authorities such as the ESA and Marine Mammal Protection Act: speedboat zones for manatee protection



in Florida,<sup>26</sup> and cruise ship restrictions in Alaska to protect humpback whales.<sup>27</sup> Clearly, the legal authority to undertake such approaches exists. The challenges for the Services, in the era of climate change and under new political leadership, are to take the initiative to use these legal authorities proactively and, in doing so, construct and cross the bridge Ruhl envisions.

24. Map prepared by R. Brezenoff & T. Robertson, Perkins Coie LLP, for presentations at *Permitting Strategies in Alaska*, sponsored by The Seminar Group (Jan. 17, 2008) and *Alaska Resources 2009*, sponsored by the Resource Development Council (Nov. 20, 2008).

25. Listing 48 Species on Kauai as Endangered and Designating Critical Habitat, 73 Fed. Reg. 62592 (Oct. 21, 2008) (to be codified at 50 C.F.R. pt. 17).

26. 50 C.F.R. §17.100–.108 (2008).

27. 36 C.F.R. §§13.1150–.1160 (2008).