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5 IN THE UNITED STATES DISTRICT COURT
6 FOR THE NORTHERN DISTRICT OF CALIFORNIA
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8 CENTER FOR BIOLOGICAL DIVERSITY,
9 et al.,

No. C-09-04087 EDL

10 Plaintiffs,

**ORDER DENYING PLAINTIFFS'
MOTION FOR SUMMARY JUDGMENT
AND GRANTING DEFENDANTS'
CROSS-MOTION FOR SUMMARY
JUDGMENT**

11 v.

12 JANE LUBCHENCO, et al.,

13 Defendants.
14 _____/

15 In this civil action for declaratory and injunctive relief, Plaintiffs Center for Biological
16 Diversity and Greenpeace (collectively, "Plaintiffs") allege that Defendants Jane Lubchenco,
17 Administrator of the National Oceanic and Atmospheric Administration ("NOAA"), Gary Locke,
18 the United States Secretary of Commerce, and the National Marine Fisheries Service ("NMFS")
19 violated the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531, *et. seq.*, in failing to list the
20 ribbon seal as threatened or endangered. *See* Compl. ¶ 1; *see also* Administrative Record ("AR") 13
21 (Endangered and Threatened Wildlife; Notice of 12-Month Finding on a Petition to List the Ribbon
22 Seal as a Threatened or Endangered Species, 73 Fed. Reg. 79822). The parties filed cross-motions
23 for summary judgment, which were fully briefed. In addition, the State of Alaska filed two amicus
24 briefs in support of Defendants. The Court held a hearing on September 2, 2010. For the reasons
25 stated at the hearing and in this Order, the Court denies Plaintiffs' Motion for Summary Judgment
26 and grants Defendants' Cross-Motion for Summary Judgment.

27 **RIBBON SEAL**

28 The ribbon seal primarily inhabits Russia's Sea of Okhotsk and the Bering and Chukchi Seas
off of western Alaska. *See* AR 13 at 79823. The species is strongly associated with the sea ice
during its whelping, mating and molting periods from mid-March through June. *See id.* Most of the

1 rest of the year is spent at sea, and the ribbon seal is rarely seen on land. See id. Ribbon seals can
2 live twenty to thirty years, and females give birth to one pup every year after four to five years of
3 age. See id.; AR 11 at 11. The pup is nursed for three to four weeks and then abandoned to fend for
4 itself. See AR 13 at 79823. Once the sea ice melts with the onset of sub-Arctic summer in June,
5 ribbon seals spread throughout their range. See AR 11 at 10.

6 Sea ice is essential to ribbon seal survival. AR 11 at 20-23. However, the sea ice habitat has
7 been shrinking. AR 890 at 4 (showing declines in sea ice in the Bering and Okhotsk Seas during
8 March through June). For example, there is evidence that for the period from 1979 through 2006,
9 the sea ice extent in the Okhotsk Sea declined by 9.3% per decade. AR 890 at 4. One estimate
10 states that the summer sea ice habitat in the Bering and Okhotsk Seas is projected to decline by 40%
11 by mid-century. AR 319 at 4. Loss of Arctic sea ice (distinct from the sea ice in the Bering Sea and
12 Okhotsk Sea) could increase shipping through the area, and therefore through some parts of the
13 ribbon seals' habitat. AR 11 at 84, 92. Expansion of commercial fishing could impact ribbon seals
14 through bycatch and through competition for prey. AR 11 at 92.

15 Because ribbon seals rely on the sea ice for breeding, whelping, nursing and molting,
16 declines in sea ice could impact ribbon seals. AR 255 at 21-22; AR 854 at 1. Declining sea ice
17 areas could also lead to declining birth rates if females cannot find quality ice on which to give birth.
18 AR 11 at 27. Survival of weaned pups can be affected if they do not have sufficient ice to haul out
19 while they are learning to swim. AR 145 at 6. Dr. Rey, a ribbon seal expert, has explained how
20 losses of sea ice have already probably resulted in high pup mortality. AR 8 at 3 (“The case of the
21 ribbon seal is most urgent . . . Pups remain on or near the ice during a 4-week molting period, when
22 they begin to feed. However, during 2006 and 2007, little sea ice remained beyond mid-May,
23 depriving the pups of their habitat and requiring a high-energy demand for aquatic life. It is highly
24 unlikely that the pups could meet this demand, probably resulting in high mortality during the
25 following summer.”). Sea ice loss can also affect adults that need the ice to molt. AR 11 at 26-27.

26 **PROCEDURAL HISTORY**

27 In December 2007, NMFS received a petition to list the ribbon seal under the ESA. See AR
28 1. NMFS conducted an initial review to determine whether the petition presented “substantial

1 scientific information indicating that the petition may be warranted.” 16 U.S.C. § 1533(b)(3)(A).
2 NMFS issued a positive ninety-day finding and initiated a Status Review of the ribbon seal. AR 3 at
3 2.

4 Alaska participated in the public comment period during which it provided information about
5 the role that the state plays in monitoring and protecting the health of the ribbon seal and the state’s
6 long term interest in maintaining a healthy seal population. See Alaska Amicus Brief at 2. Alaska
7 has been actively involved in ribbon seal research and management since at least 1970, and provided
8 NMFS with over sixty studies, reports, correspondence, or other writings by state-funded personnel.
9 Alaska’s Amicus brief at 11.

10 In conducting its Status Review, NMFS assembled a Biological Review Team (“BRT”) of
11 eight expert scientists, including a climate expert from the Office of Oceanic and Atmospheric
12 Research. See AR 521a. The Status Review was published on December 19, 2008. AR 11. The
13 BRT concluded that ribbon seals were not in current danger of extinction throughout all or a
14 significant portion of their range, and that the population was “likely to decline gradually for the
15 foreseeable future [to 2050], primarily from slight but chronic impacts on reproduction and survival
16 caused by reduced frequency of years with sea ice of suitable extent, quality and duration of
17 persistence,” but that “despite the expectation of a gradual decline, ribbon seals are not likely to
18 become an endangered species within the foreseeable future throughout all or a significant portion of
19 their range.” AR 11 at 86. NMFS considered the Status Review along with other information, and
20 recommended adopting the BRT team’s conclusions and recommendations. AR 12 at 1-3. On
21 December 30, 2008, NMFS published the twelve-month finding that listing the ribbon seal was not
22 warranted. AR 13.

23 **STATUS REPORT AND TWELVE-MONTH FINDING**

24 The BRT was composed of scientists with expertise in the biology and ecology of ribbon
25 seals and in fisheries from NMFS’s Alaska Fisheries Science Center, and a climate expert from
26 NOAA’s Pacific Marine Environment Lab. AR 13 at 79823. The BRT had two tasks: to determine
27 whether the ribbon seal qualified as one or more species under the ESA and, if so, to conduct an
28 extinction risk assessment to determine whether the species is endangered or threatened. Id.

1 NMFS evaluated the extinction risk based on the five factors set forth in the ESA. 16 U.S.C.
2 § 1533(a)(1)(A)-(E). Preliminarily, with respect to demographic factors, NMFS found that “with a
3 population likely comprising at least 200,000 individuals, ribbon seals are not currently at risk from
4 the demographic issues of low abundance commonly associated with ESA listing decisions. . . .”
5 AR 13 at 79824. Researchers developed a provisional population estimate of 49,000 ribbon seals in
6 the eastern and central Bering Sea, and using “restrictive assumptions,” the number was scaled to
7 produce total Bering Sea estimates ranging from 98,000 to 190,000. Id. Similar scalings based on a
8 rangewide distribution produced estimates in the Bering Sea, Sea of Okhotsk and the total range of
9 115,000, 100,000 and 215,000 respectively. Id. NMFS found that:

10 The current population trend is unknown, but the recent estimate of 49,000 ribbon
11 seals in the eastern and central Bering Sea is consistent enough with historical
12 estimates to suggest that no major or catastrophic change has occurred in recent
13 decades. The species is thought to occupy its entire historically observed range. There
14 are no portions of their range in which ribbon seals have been reported to have
15 disappeared, nor are they known to be demographically at risk in any portion of their
16 range.

17 Id.

18 Plaintiffs state that the population estimates are overly optimistic because there is not much
19 data, so it is equally likely that the population is declining. Further, the Status Review states that
20 “no current and reliable abundance estimates have been published.” AR 11 at 37. The Status
21 Review also states: “the great uncertainty about ribbon seal population trends restricts the overall
22 confidence in assessing the species’ long term risks.” AR 11 at 44. NMFS concluded that: “overall,
23 it appears that ribbon seals have had generally good conditions in the central Bering Sea during the
24 past several decades.” AR 11 at 30 (citing Quackenbush and Citta (2008)). But the Quackenbush
25 and Citta study was limited in its ability to detect population change because of low sample size.
26 AR 328 at 27-28 (finding a trend to older classes of ribbon seals, which might be indicative of
27 declining population). Another Quackenbush study (AR 329) revealed that the majority of
28 subsistence hunters offering an opinion had not observed a decline in ribbon seal populations since
they began hunting (although there was little information about ribbon seals because they are rarely
encountered). AR 11 at 38-39.

With respect to the first factor, present or threatened destruction, modification or curtailment

1 of habitat or range, NMFS addressed the issue of sea ice coverage in the ribbon seal's range. The
2 BRT's climate change expert, Dr. Overland, and his colleague, Dr. Stabeno, prepared a paper on
3 climate change impacts to the ribbon seal. AR 445. The result of that analysis was the recognition
4 by NMFS scientists of a distinction in climate science between summer ice in the Arctic and spring
5 ice in the Bering Sea: "decoupling of the climate system between summer ice extent in the Arctic
6 basin and spring ice extent in the Bering Sea, and thus the climate impact on the habitats for the
7 ribbon and other ice-associated seals of the Bering Sea." AR 11 at 49. The twelve-month finding
8 states:

9 Unlike the Arctic Ocean, where sea ice is present year round, the ice in the Bering
10 Sea and Sea of Okhotsk is seasonal in nature. The main thermodynamic physical
11 influence at high latitudes is the cold and darkness that occurs in winter. Therefore,
12 despite the recent dramatic reductions in Arctic Ocean ice extent during summer, the
13 sea ice in the northern Bering Sea and Sea of Okhotsk is expected to continue
14 forming annually in winter for the foreseeable future.

15 Id. Moreover, "[t]he result is that the seasonal formation of sea ice in the northern Bering Sea and
16 Sea of Okhotsk is substantially decoupled from the summer ice extent in the Arctic Ocean, and is
17 expected to continue annually through the foreseeable future, along with typical, large interannual
18 variations in extent and duration of persistence." Id.

19 This definition regarding the de-coupling of the two ice areas is supported by three sets of
20 data. First, the Overland and Stabeno paper reviewed climate data for Nome, Alaska indicating that
21 the average high temperature was -3 degrees C, and concluded that even assuming a warming of 3
22 degrees C by 2050, "it is likely that melting of sea ice will not begin until May for either present or
23 future global warming conditions." AR 445 at 2. Second, NMFS scientists examined sea ice
24 conditions in the Bering Sea in 2008, which presented near record-high sea ice in the Bering Sea,
25 with the melt not occurring until June, which is a clearer case of de-coupling. AR 445 at 2-3; AR 11
26 at 50. Third, NMFS's scientists performed new modeling by Dr. Overland using the same model to
27 his earlier paper with Wang in 2007. AR 319. That modeling showed that "while there is some
28 decrease in sea ice area in April out to 2050 . . . it is nearly impossible to create a sea ice free Bering
Sea in April." AR 445 at 5 (predicting "large interannual variability" in May, which is "not unlike
the climatological record"). This result contrasts with projections of summer ice in the Arctic

1 Ocean, where climate models indicate a 50% sea ice loss or more by 2050. AR 445 at 5. The new
2 modeling concluded that “sea ice cover will remain a major ecological factor for the northern Bering
3 Sea and the Sea of Okhotsk during late winter through spring.” AR 11 at 55. However, the data
4 indicated that there may be “more frequent years of low or minimal ice extent, particularly in May-
5 June. Id.

6 The Status Review team observed that the seasonal formation of sea ice in the northern
7 Bering Sea and the Sea of Okhotsk is substantially de-coupled from the summer ice formation in the
8 Arctic Ocean. AR 11 at 63. Therefore, the review team analyzed models dealing with the former,
9 not the latter, areas. AR 11 at 63 (analysis indicates that “the late March to early May period in
10 which the peak of reproduction occurs will continue to have substantial ice for the foreseeable
11 future.”). The de-coupling of the Bering-Okhotsk sea ice regime from the Arctic regime means that:
12 “ribbon seals . . . are anticipated to experience little or no direct effects from the further retreat of
13 summer sea ice in the Arctic polar basin, as they are primarily a pelagic, sub-Arctic species during
14 the summer months.” AR 11 at 67. Instead, “if ribbon seal habitat within the current range is
15 reduced by climate change, it is plausible that the population will adjust by shifting its range to
16 include new habitat made suitable by, for example, a northward shift of the typical spring ice edge.”
17 AR 11 at 46-47.

18 Plaintiffs argue that de-coupling does not change the fact that both summer sea ice in the
19 Arctic and winter sea ice in the Bering and Okhotsk Seas are disappearing. AR 889, 890, 891, 905.
20 NMFS responds that the characterization of the latter ice as “disappearing” is overstated because
21 there is evidence that the sea ice will remain within the parameters to which the ribbon seal is
22 adapted. AR 11 at 95. Further, “while there may be more frequent years in which sea ice coverage
23 is reduced, the late March to early May period in which the peak of ribbon seal reproduction occurs
24 will continue to have substantial ice for the foreseeable future.” AR 13 at 79825. NMFS noted that
25 there had been no study to verify whether vital rates of reproduction or survival have been affected
26 by interannual variations in ice extent and breeding. Id. Survival of the young could be affected
27 because the ice will not extend as far south as it has typically in the past, but “lacking relevant data,
28 the most conservative approach is to assume that the population has been at equilibrium with respect

1 to conditions in the past and that a change such as more frequent breeding farther from preferred
2 foraging habitats will have some impact in vital rates.” Id. (concluding that slight increase in
3 warmer years will have “some impact on reproductive rates”). The Status Review team, however,
4 found a lack of relevant data regarding impacts on seal reproduction. AR 11 at 63-64 (finding that
5 the analogy to harp seals is inapt because they have characteristics such as grouping and being tied
6 to specific places, that are different from ribbon seals). Subadults, which molt earlier than adults
7 and are not constrained by habitat requirements for breeding, “may be the least sensitive to the
8 availability and quality of sea ice.” Id. Adult ribbon seals, which are the last to molt, might be
9 expected to be the most affected by the warmer years, but NMFS could not quantify the impacts or
10 the extent to which ribbon seals may adapt by shifting locations for molting. Id. NMFS concluded
11 that: “the anticipated slight increase in frequency of years with low ice extent in May and June is
12 likely to have some impact on survival rates.” Id.

13 NMFS found some mitigating factors, including that ribbon seals “may be less constrained to
14 a specific geographic area or region of the ice pack once breeding is complete, around the time of
15 the adult molt.” AR 13 at 79826. Also, the models used by NMFS to determine the existence of sea
16 ice may show no sea ice where in fact there is sufficient sea ice for the ribbon seal. Id. Also, the
17 age of maturation for females has been low and pregnancy rates have been high in the recent past,
18 implying that foraging conditions have been more favorable than previously. Id. Further, the Status
19 Review team found other factors indicating that ribbon seals are particularly resilient in the face of
20 climate change. For example, there is data that some seal species may be able to breed earlier in the
21 year in gradual response to environmental conditions. AR 11 at 65 (citing AR 241). Further, there
22 is data showing the ribbon seals are highly mobile and thus more likely to move with the ice. AR 11
23 at 65-66 (citing AR 115). The Status Review identified factors going to the ribbon seal’s resilience,
24 stating that the seal’s evolution “includes at least one period when the conditions were in many
25 respects similar to consensus model projections for high northern latitudes in the late 21st century.”
26 AR 11 at 95. Thus, the review team concluded that the seal retained the “genetic plasticity to adapt
27 to . . . climatic extremes.” Id. NMFS concluded that: “the net impacts will be slight but chronic and
28 likely to cause a gradual decline in the ribbon seal population, but such decline is of insufficient

1 magnitude to place it in danger of extinction throughout all or a significant portion of its range, now
2 or within the foreseeable future.” AR 13 at 79826.

3 NMFS contrasted the ribbon seal with the recent decision to list the polar bear as threatened.
4 AR 13 at 79826. NMFS addressed ocean acidification, which is a result of increased carbon dioxide
5 in the atmosphere, stating that it “may impact ribbon seal survival and recruitment through
6 disruption of trophic regimes that are dependent on calcifying organisms,” but that the “nature and
7 timing of such impacts are . . . extremely uncertain.” Id. Finally, NMFS noted that changes in
8 ribbon seal prey, “anticipated in response to habitat changes resulting from ocean warming, and loss
9 of sea ice, have the potential for negative impacts, but these impacts are not well understood.” Id.

10 With respect to the second factor, NMFS looked at over-utilization for commercial,
11 subsistence, recreational, scientific or educational purposes and determined that these were
12 “currently at very low levels and [are] not projected to increase to significant threat levels in the
13 foreseeable future.” AR 13 at 79826-79827. NMFS noted that even though Russian commercial
14 harvest quotas are quite high (approximately 18,000 annually), “the actual takes are low because of
15 poor economic viability.” Id. at 79827. Subsistence harvest levels are historically low, but could
16 increase if sea ice conditions force ribbon seals closer to land occupied by Alaskan Native
17 communities. Id.

18 Third, NMFS looked at disease, parasites and predation, none of which are a significant
19 threat to the ribbon seal. AR 13 at 79827. A variety of pathogens and diseases were found among
20 ribbon seals, but the population impact was unknown, although there could be an increase if the
21 habitat is shifted. Id. Ribbon seals are not known to be the primary prey of any predators. Id.

22 Fourth, NMFS examined the inadequacy of existing regulatory measures and found that:

23 There is little evidence that the inadequacy of existing regulatory mechanisms
24 currently poses a threat to ribbon seals throughout all or a significant portion of their
25 range. However, there are no known regulatory mechanisms that effectively address
26 global reductions in sea ice habitat at this time. Also, it is unclear what regulatory
27 mechanisms are in place to ensure that potential commercial harvests in Russia are
28 conducted in a sustainable fashion.

AR 13 at 79827.

Fifth, NMFS also examined other natural or manmade factors affecting the species’

1 continued existence. AR 13 at 79827. Although there are some pollutants in the habitat, there was
 2 no “conspicuous evidence of toxicity or other significant impacts to the species.” Id. Oil and gas
 3 exploration and development activities could affect the ribbon seal, but would probably be low
 4 because the ribbon seal is highly dispersed during the year when they are not breeding, whelping and
 5 molting. Id. The threat posed by oil spills would increase if development and shipping activities
 6 increase across the ribbon seal range. Id. NMFS noted that bycatch is not a particularly significant
 7 threat. Id. Shipping traffic could increase with the decrease of Arctic sea ice, which could have an
 8 impact on ribbon seals. Id.

9 NMFS also addressed conservation efforts, and stated that it was not aware of any
 10 conservation efforts. AR 13 at 79828. Nor is the ribbon seal subject to any special protections or
 11 designations by foreign nations. Id.

12 NMFS concluded that:

- 13 (1) Ribbon seals are not in current danger of extinction throughout all or a significant
 14 portion of their range;
 15 (2) the abundance of the ribbon seal population is likely to decline gradually for the
 16 foreseeable future, primarily from slight but chronic impacts on reproduction and
 17 survival caused by reduced frequency of years with sea ice of suitable extent, quality,
 and duration of persistence;
 (3) despite the expectation of a gradual decline, ribbon seals are not likely to become
 an endangered species within the foreseeable future throughout all or a significant
 portion of their range.

18 AR 13 at 79828. Nevertheless, NMFS added the ribbon seal to the Species of Concern list, which
 19 will “(1) increase public awareness about the species; (2) further identify data deficiencies and
 20 uncertainties in the species’ status and the threats it faces; (3) and stimulate cooperative research
 21 efforts to obtain the information necessary to evaluate the species’ status and threats.” Id.

22 **LEGAL STANDARD**

23 The Court reviews challenges under the ESA to ensure that the agency has not acted in a
 24 manner that is: “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with
 25 law.” 5 U.S.C. § 706; see also River Runners for Wilderness v. Martin, 593 F.3d 1064, 1067 (9th
 26 Cir. 2010) (stating that the plaintiffs in that case had not satisfied the “high threshold” for setting
 27 aside agency action); Trout Unlimited v. Lohn, 559 F.3d 946, 955 (9th Cir. 2009) (“In applying this
 28 standard, we defer to the informed exercise of agency discretion, especially where that discretion is

1 exercised in an area where the agency has special ‘technical expertise.’”); Okanogan Highlands
 2 Alliance v. Williams, 236 F.3d 468, 471 (9th Cir. 2000). Further:

3 Normally, an agency rule would be arbitrary and capricious if the agency has relied
 4 on factors which Congress has not intended it to consider, entirely failed to consider
 5 an important aspect of the problem, offered an explanation for its decision that runs
 6 counter to the evidence before the agency, or is so implausible that it could not be
 7 ascribed to a difference in view or the product of agency expertise.

8 Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual
 9 Automobile Ins. Co., 463 U.S. 29, 43 (1983). The Court's role is to:

10 consider whether the [agency's] decision was based on a consideration of the relevant
 11 factors and whether there has been a clear error of judgment. [citation omitted].
 12 Although this inquiry into the facts is to be searching and careful, the ultimate
 13 standard of review is a narrow one. The court is not empowered to substitute its
 14 judgment for that of the agency. The final inquiry is whether the Secretary's action
 15 followed the necessary procedural requirements.

16 Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971).

17 Further, “[i]n recognition of the agency's technical expertise the court usually defers to the
 18 agency's analysis, particularly within its area of competence.” Arizona Cattle Growers’ Association
 19 v. Salazar, 606 F.3d 1160, 1163 (9th Cir. 2010) (citing Earth Island Inst. v. Hogarth, 494 F.3d 757,
 20 766 (9th Cir. 2007); Nat'l Ass'n of Home Builders v. Norton, 340 F.3d 835, 843-44 (9th Cir. 2003));
 21 see also Trout Unlimited, 559 F.3d at 959 (“It is not our role to ask whether we would have given
 22 more or less weight to different evidence, were we the agency. Assessing a species' likelihood of
 23 extinction involves a great deal of predictive judgment. Such judgments are entitled to particularly
 24 deferential review.”). “However, the court need not defer to the agency when the agency's decision
 25 is without substantial basis in fact, and there must be a rational connection between the facts found
 26 and the determinations made.” Id. (citing Earth Island, 494 F.3d at 766); see also Brower v. Evans,
 27 257 F.3d 1058, 1065 (9th Cir. 2001) (“The deference accorded an agency's scientific or technical
 28 expertise is not unlimited. The presumption of agency expertise can be rebutted when its decisions,
 while relying on scientific expertise, are not reasoned.”) (internal citation omitted).

29 **FRAMEWORK OF THE ENDANGERED SPECIES ACT**

30 Congress enacted the ESA in 1973 “to provide a means whereby the ecosystems upon which
 31 endangered species and threatened species depend may be conserved.” 16 U.S.C. § 1531(b). The

1 ESA's "primary purpose ... is to prevent animal and plant species endangerment and extinction
2 caused by man's influence on ecosystems, and to return the species to the point where they are viable
3 components of their ecosystems." H.R.Rep. No. 95-1625, at 5 (1978), reprinted in 1978
4 U.S.C.C.A.N. 9453, 9455.

5 The ESA requires NMFS to engage in certain analyses that are at issue in this case. First,
6 NMFS must decide whether a population of fish or wildlife constitutes a "species" or a "distinct
7 population segment" within the meaning of the ESA. The ESA defines "species" to include "any
8 subspecies of fish or wildlife or plants, and any distinct population segment of any species of
9 vertebrate fish or wildlife which interbreeds when mature." 16 U.S.C. § 1532(16) (emphasis added).
10 "The ability to designate and list [distinct population segments] allows the [agency] to provide
11 different levels of protection to different populations of the same species." Nat'l Ass'n of Home
12 Builders v. Norton, 340 F.3d 835, 842 (9th Cir. 2003). The ESA does not define the term "distinct
13 population segment."

14 Second, after deciding whether a population of fish or wildlife constitutes a "species" or a
15 "distinct population segment," NMFS must decide whether to "list" the species or distinct
16 population segment. A species or distinct population segment may be listed as either "endangered"
17 or "threatened." 16 U.S.C. § 1533(a)(1). An "endangered" species "is in danger of extinction
18 throughout all or a significant portion of its range." Id. § 1532(6). A "threatened" species "is likely
19 to become an endangered species within the foreseeable future." Id. § 1532(20). A species may be
20 considered "threatened" or "endangered" because of:

- 21 (A) the present or threatened destruction, modification, or curtailment of its habitat or
range;
- 22 (B) overutilization for commercial, recreational, scientific, or educational purposes;
- 23 (C) disease or predation;
- 24 (D) the inadequacy of existing regulatory mechanisms; or
- (E) other natural or manmade factors affecting its continued existence.

25 Id. § 1533(a)(1)(A)-(E). The ultimate listing determinations must be based "solely on ... the best
26 scientific and commercial data available after conducting a review of the status of the species." Id. §
27 1533(b)(1)(A). The identification of a downward trend in habitat by itself is not sufficient to
28 establish that a species should be listed under the ESA. See Defenders of Wildlife v. Norton, 258

1 F.3d 1136, 1143 (9th Cir. 2001) (stating that it “does not make sense to assume that the loss of a
2 predetermined percentage of habitat or range would necessarily qualify a species for listing.”).

3 Plaintiffs argue that the best available scientific and commercial data standard gives “the
4 benefit of the doubt” to the species. See Center for Biological Diversity v. Lohn, 296 F. Supp. 2d
5 1233, 1239 (W.D. Wash. 2003). However, as the Court in Trout Unlimited v. Lohn, 645 F. Supp. 2d
6 929, 947 (D. Or. 2007) observed: “Although an agency must still use the best available science to
7 make that [listing] determination, Conner [v. Burford], 848 F.2d 1441 (9th Cir. 1988)] cannot be read
8 to require an agency to ‘give the benefit of the doubt to the species’ under Section 4 if the data is
9 uncertain or inconclusive. Such a reading would require listing a species as threatened if there is
10 any possibility of it becoming endangered in the foreseeable future. This would result in all or
11 nearly all species being listed as threatened.” See also Alaska Amicus brief Ex. A (EPIC v. NMFS,
12 C-02-5401 EDL at 15-16 (Mar. 2, 2004)).

13 **DISCUSSION**

14 Plaintiffs argue that the twelve-month finding was arbitrary and capricious because: (1)
15 NMFS failed to engage in a rational analysis of whether any distinct population segment (“DPS”) of
16 the ribbon seal may warrant listing or whether the species is threatened or endangered in a
17 “significant portion of its range;” and (2) NMFS relied on an irrational time frame for the
18 “foreseeable future.” Plaintiffs also argue that NMFS erred by not utilizing the best available
19 science in making its twelve-month finding.

20 **1. “Significant portion of its range”**

21 A species is endangered if it is “in danger of extinction throughout all or *a significant portion*
22 *of its range*,” and is threatened if it is “likely to become an endangered species within the
23 foreseeable future throughout all or *a significant portion of its range*.” See 16 U.S.C. § 1532(6),
24 (20) (emphasis added). This definition marked a “significant shift” away from prior statutory
25 language, which considered a species to be endangered only when it was threatened with worldwide
26 extinction. H.R. Rep. No. 93-412 at 10 (1973). Although the agency has wide discretion in
27 determining what constitutes a significant portion of the range, the agency must consider and explain
28 whether a species is endangered or threatened throughout a significant portion of its range if “there

1 are major geographical areas in which it is no longer viable but once was.” See Defenders of
 2 Wildlife v. Norton, 258 F.3d 1136, 1145 (9th Cir. 2001) (“where, as here, it is on the record apparent
 3 that the area in which the lizard is expected to survive is much smaller than its historical range, the
 4 Secretary must at least explain her conclusion that the area in which the species can no longer live is
 5 not a ‘significant portion of its range.’”). This task includes consideration of lost historical range.
 6 See Tuscan Herpetological Society v. Salazar, 566 F.3d 870, 876 (9th Cir. 2009).

7 As noted above, in the twelve-month finding at issue here, NMFS concluded that ribbon
 8 seals was not in current danger of extinction throughout all or a significant portion of their range,
 9 and that despite the expectation of a gradual decline in the abundance of ribbon seals, they are not
 10 likely to become an endangered species within the foreseeable future throughout all or a significant
 11 portion of their range. See AR 13 at 79828.

12 Plaintiffs argue that NMFS used a definition of “significant portion of its range” that the
 13 Ninth Circuit rejected in Defenders of Wildlife. In that case, the Fish & Wildlife Service (“FWS”)
 14 determined that the flat-tailed horned lizard did not warrant listing as a threatened species. The
 15 court found that the Secretary failed to address the “significant portion of range” at all in the notice.
 16 In the Secretary’s briefing, she interpreted the significant portion of range language to mean that:

17 a species is eligible for protection under the ESA if it ‘faces threats in enough key
 18 portions of its range that the entire species is in danger of extinction, or will be within
 the foreseeable future.’

19 Defenders of Wildlife, 258 F.3d at 1141 (“She therefore assumes that a species is in danger of
 20 extinction in ‘a significant portion of its range’ only if it is in danger of extinction everywhere.”).

21 The court determined that this was a redundant and unacceptable reading of the statute:

22 If, however, the effect of extinction throughout “a significant portion of its range” is
 23 the threat of extinction everywhere, then the threat of extinction throughout “a
 24 significant portion of its range” is equivalent to the threat of extinction throughout all
 25 its range. Because the statute already defines “endangered species” as those that are
 “in danger of extinction throughout all ... of [their] range,” the Secretary’s
 26 interpretation of “a significant portion of its range” has the effect of rendering the
 phrase superfluous.

27 Defenders of Wildlife, 258 F.3d at 1141-42.

28 Here, in the Status Review, the BRT stated that:

1 However, in assessing extinction risk, the BRT considered whether any of the threats
2 set forth below posed a risk to the species throughout all or a significant portion of its
3 range, as a species must be declared to be endangered or threatened even if it is at
4 risk in only a portion of its range, when that portion is important to the species'
5 continued viability.

6 AR 11 at 26. Plaintiffs equate the portion of the range being important to viability of the species as
7 a whole to the improper requirement that the portion place the entire species in danger of extinction.
8 Plaintiffs argue that the failure to use a proper construction of "significant portion of range" was not
9 harmless because Defendants failed, for example, to separately consider the ribbon seal's risk of
10 extinction in the Sea of Okhotsk.

11 Defendants respond that the definition in Defenders of Wildlife was deficient because it
12 rendered the significant portion of the range language superfluous, whereas here the Status Review
13 states only that the portion of a range would be significant if it was important to the species'
14 viability, as opposed to determinative of viability. Further, Defendants note that the Ninth Circuit
15 has stated that the "significant portion of its range" language is "inherently ambiguous." Defenders
16 of Wildlife, 258 F.3d at 1141. Thus, Defendants argue that it was entirely proper for them to imbue
17 the term "significant" with a biological basis. See AR 743.b.

18 Whatever the merits of this dispute in the abstract, the result here is the same. Defenders of
19 Wildlife teaches that if the area in which a species is expected to survive is smaller than its historical
20 range, the agency must explain why the area in which the species cannot live is not a significant
21 portion of the range. Here, NMFS did so, stating in its twelve-month finding that:

22 The species is thought to occupy its entire historically observed range. There are no
23 portions of their range in which ribbon seals have been reported to have disappeared,
24 nor are they known to be demographically at risk in any portion of their range.

25 AR 13 at 79824. Thus, even using the accepted definition from Defenders of Wildlife, NMFS has
26 found that there are no "major geographical areas in which [the ribbon seal] is not longer viable but
27 once was."

28 Plaintiffs argue that using an improper definition was not harmless error because NMFS
 failed to consider whether the ribbon seal was at risk of extinction in the separate area of the Sea of
 Okhotsk, which lies exclusively in Russian waters. The Sea of Okhotsk provides habitat for about

1 half of the ribbon seal population. AR 13 at 79824. Plaintiffs argue that there is only one sentence
2 in the Status Review about sea ice in the Sea of Okhotsk: “As this region is dominated by cold air
3 masses for much of the winter and spring, we would expect the present seasonal cycle of first year
4 sea ice to continue to dominate the future habitat of the Sea of Okhotsk, similar to the Bering Sea.”
5 AR 11 at 55. Plaintiffs argue that in making this statement, NMFS improperly ignored two
6 published studies that Plaintiffs believe show large-scale past and future declines in sea ice in the
7 Sea of Okhotsk.

8 The first study, from Meier in 2007, reported that sea ice extent in the Sea of Okhotsk
9 declined by 9.3% per decade during 1979-2006, and that the declines were significant during the
10 months when ribbon seals use the sea ice. AR 890 at 4, Table 2. Although Plaintiffs argue that
11 NMFS failed to consider the Meier study, Defendants point out that it was included in the
12 administrative record, which indicates that it was considered by NMFS. See Thompson v. US Dep’t
13 of Labor, 885 F.2d 551, 555 (9th Cir. 1989) (stating that: “The ‘whole’ administrative record,
14 therefore, consists of all documents and materials directly or indirectly considered by agency
15 decision-makers and includes evidence contrary to the agency's position.”).

16 Further, Defendants point to the new analysis of sea ice trends in the Sea of Okhotsk
17 conducted around the same time as the Meier study by NMFS climate scientist Wang, who reached a
18 different conclusion. The Wang study stated that: “Reduced sea ice areas are seen over three out of
19 four (*except* the Sea of Okhotsk) sub-Arctic seas in recent decades, particularly after 2000 based on
20 combined in situ and satellite observations.” AR 410 at 1 (Wang study (2007) (emphasis added)).
21 Even though the Wang study was addressing primarily atmospheric forcing, it also addressed sea
22 ice. AR 410 at 15 (stating that “negative sea ice anomalies since the late 1990’s are apparent for all
23 but the Sea of Okhotsk.”).

24 Plaintiffs argue that the Wang study itself states that sea ice analysis is unreliable. Although
25 the study says that “caution must be used in interpreting sea ice data,” that statement supports the
26 study’s statements that data from before 1978 may have been sparse and that the introduction of
27 satellite data may have caused spikes -- not that all data is unreliable. AR 410 at 15 (“[Data] is more
28 reliable after 1979 with blending in the satellite observations.”). Further, Plaintiffs have not shown

1 that Defendants ignored the Meier study or improperly relied on the Wang study in reaching its
2 decision. See Ecology Center v. Castenada, 574 F.3d 652, 659 (9th Cir. 2009) (“Though a party
3 may cite studies that support a conclusion different from the one the Forest Service reached, it is not
4 our role to weigh competing scientific analyses.”).

5 Plaintiffs also argue that Defendants failed to consider a second study projecting significant
6 continuing declines in sea ice in the Sea of Okhotsk through 2100. See AR 319 (Overland and
7 Wang 2007 study). The Overland and Wang study projected in 2007 that the extent of summer sea
8 ice in the Okhotsk Sea *will* decline by 40% by 2050, and will continue to decline through 2100, and
9 that winter sea ice *may* also decline by 40%. AR 319 at 1, 6. The Status Review, however, explains
10 that: “We have used the same procedure as in Overland and Wang (2007) for summer and winter ice
11 extents to assess the confidence for using IPCC climate models (Meehl et al. 2007a) to project April
12 and May first-year sea ice extents for the eastern Bering Sea.” AR 11 at 53. Thus, the Overland and
13 Wang 2007 study was co-authored by the same climate scientist (Overland) who participated on the
14 BRT, and the modeling in the Status Review was based on the original 2007 study that he co-
15 authored. AR 11 at 53-55. Although Plaintiffs take issue with the fact that the BRT did not conduct
16 this analysis for the Okhotsk Sea, the Status Review also states that: “As this region is dominated by
17 cold air masses for much of the winter and spring, we would expect the present seasonal cycle of
18 first year sea ice to continue to dominate the future habitat of the Sea of Okhotsk, similar to the
19 Bering Sea.” AR 11 at 55.

20 Plaintiffs have not shown that NMFS failed to consider the ice in the Sea of Okhotsk. Both
21 the Wang study and the Overland and Wang 2007 study were included in the administrative record,
22 and NMFS concluded that the Sea of Okhotsk was not a separate portion of the ribbon seal range.
23 Further, Defendants point to numerous citations in the administrative record regarding data that
24 Defendants considered regarding the seal in the Okhotsk Sea. See AR 138 (food habits of seals,
25 including the ribbon seal), 187 (same), 212 (noting reduction of sealing in Okhotsk Sea), 324 (listing
26 details of ribbon seals including life span, exploitation, census data, food), 347 (discussing
27 variability of sea ice in Okhotsk Sea), 394 (report of migration of seals, including ribbon seals). In
28 addition, NMFS engaged in personal communications with Russian scientists regarding the ribbon

1 seal. AR 11 at 68-70, 79-80.

2 In sum, Plaintiffs' arguments that NMFS did not properly analyze the "significant portion of
3 its range" are not persuasive. The twelve-month finding states that the seals occupy their entire
4 historically observed range, and there is no evidence to the contrary.

5 **2. Distinct population segments**

6 The ESA defines "species" as: "any subspecies of fish or wildlife or plants, and any distinct
7 population segment of any species of vertebrate fish or wildlife which interbreeds when mature." 16
8 U.S.C. § 1532(16). A Distinct Population Segment ("DPS") can be designated if it is both
9 "discrete" and "significant." See Policy Regarding the Recognition of Distinct Vertebrate
10 Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996). A
11 population segment is discrete if:

12 1. It is markedly separated from other populations of the same taxon as a
13 consequence of physical, physiological, ecological, or behavioral factors.
14 Quantitative measures of genetic or morphological discontinuity may provide
15 evidence of this separation;

16 2. It is delimited by international governmental boundaries within which differences
17 in control of exploitation, management of habitat, conservation status, or regulatory
18 mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

19 61 Fed. Reg. 4722, 4725. If a population segment is discrete under one or both of the above
20 conditions, the agency must examine the biological and ecological significance of the population
21 segment. Id. In making this examination, the agency shall:

22 consider available scientific evidence of the discrete population segment's importance
23 to the taxon to which it belongs. This consideration may include, but is not limited to,
24 the following:

25 1. Persistence of the discrete population segment in an ecological setting unusual or
26 unique for the taxon,

27 2. Evidence that loss of the discrete population segment would result in a significant
28 gap in the range of a taxon,

3. Evidence that the discrete population segment represents the only surviving natural
occurrence of a taxon that may be more abundant elsewhere as an introduced
population outside its historic range, or

4. Evidence that the discrete population segment differs markedly from other
populations of the species in its genetic characteristics.

1 61 Fed. Reg. 4722, 4725. “Any one of the factors is sufficient to support a listing determination if
2 the factor causes the species to be in danger of extinction or likely to become an endangered species
3 in the foreseeable future throughout all or a significant portion of its range.” Defenders of Wildlife
4 v. Salazar, 2010 WL 3084194, at *6 (D. Mont. Aug. 5, 2010). Listing decisions must be made
5 “solely on the basis of the best scientific and commercial data available,” and without reference to
6 possible economic or other impacts of such a determination. 16 U.S.C. § 1533(b)(1)(A); 50 C.F.R. §
7 424.11(b); 50 C.F.R. § 424.13.

8 Further, if a population segment is discrete and significant, its evaluation for endangered or
9 threatened status will be based on the ESA’s definitions of those terms and a review of the factors
10 enumerated in section 4(a). It may be appropriate to assign different classifications to different
11 DPSs of the same vertebrate taxon. See 61 FR 4722, 4725.

12 Here, in the twelve-month finding, NMFS concluded that under the DPS policy:

13 Although there are two main breeding areas for ribbon seals, one in the Sea of
14 Okhotsk and one in the Bering Sea, there is currently no evidence of discrete
15 populations on which to base a separation into DPSs. Therefore, the entire global
16 population was considered to comprise the species for the purpose of assessing
17 extinction risk.

18 AR 13 at 79824. The Status Review concluded that: “In summary, no compelling evidence has been
19 presented for demographically significant population structure within the ribbon seal breeding
20 distribution.” AR 11 at 25. The BRT recommended that a high priority be placed on obtaining an
21 inventory of relevant samples to conduct a genetic analysis. Id.

22 Plaintiffs argue that these brief references to whether a DPS exists show that NMFS
23 improperly failed to analyze both the discreteness and significance prongs of the policy.
24 Specifically, Plaintiffs focus on the lack of analysis of whether discreteness exists based on different
25 management regimes across international borders, and argue that there are differing management
26 regimes for Russian ribbon seals in the Sea of Okhotsk and Alaskan ribbon seals in the Bering Sea
27 that would satisfy that prong. See Nat’l Ass’n of Home Builders v. Norton, 340 F.3d 835, 842 (9th
28 Cir. 2003) (“Although the use of international borders ‘may introduce an artificial and
non-biological element’ into the discreteness standard, ‘it appears to be reasonable for national
legislation ... to recognize units delimited by international boundaries when these coincide with

1 differences in the management, status, or exploitation of a species.”) (citing 61 Fed. Reg. at 4723).

2 The Status Review reveals that Russia has previously had a significant commercial hunt of
3 ribbon seals. For example, for the period from 1957-1968, the commercial harvest had total catches
4 ranging between 11,300 and 27,100 ribbon seals per year. AR 11 at 53. Beginning in 1969, quotas
5 were introduced in Russia, with limits set at 7,000 ribbon seals per year in the Okhotsk Sea and
6 3,000 in the Bering Sea. Id. at 54. In the early 1980’s, the quotas were further reduced to 3,500
7 ribbon seals per year, but sources suggest that the regulations were not actually followed. Id.
8 Commercial harvest was 5,000 to 6,000 ribbon seals per year in the Okhotsk Sea from 1969-1992,
9 and even higher in 1982-1989, ranging from 9,000 to 15,000 per year. Id. Commercial harvest
10 remained high during the 1990’s in the Okhotsk Sea. Id. Beginning in 1991, commercial sealing
11 became less economically viable. Id. at 55. In the early 2000’s, Russia increased their quotas on
12 ribbon seals in Russian waters, allowing total catches between 16,700 and 21,000 per year during
13 2002-2005. Id. The actual harvest levels, however, were a fraction of those amounts, and current
14 harvest rates remain low in the tens to few hundreds of ribbon seals per year. Id. The Status Review
15 acknowledged that: “The recent high quotas for ribbon seals in Russian waters represent a potential
16 risk.” Id. By contrast, commercial hunting of marine mammals in US territorial waters is prohibited
17 by the Marine Mammal Protection Act. Id.

18 **A. Waiver**

19 Defendants argue that Plaintiffs have waived any claim that NMFS should have designated a
20 Russian DPS. Specifically, Defendants argue that a twelve-month finding is to be made on the
21 petitioned action (16 U.S.C. § 1533(b)(3)(B)(i)), and that the petition in this case did not request that
22 NMFS designate any DPS for the ribbon seal. AR 1 at 11 (petition stating that: “the distribution of
23 the ribbon seal is apparently continuous from the Okhotsk Sea to the Bering Sea,” and that “there is
24 no genetic evidence available to split these groups.”). Further, Defendants point to the ninety-day
25 finding, in which NMFS requested that the public submit information relevant to whether “any
26 populations of ice seal species may qualify as distinct population segments” (AR 3 at 2-3), and
27 Plaintiffs did not provide any information on that issue.

28 The cases cited by Defendants for their waiver argument, however, do not address the ESA

1 petitioning process. See, e.g., United States v. L.A. Tucker Truck Lines, Inc., 344 U.S. 33, 37
 2 (1952); Muckleshoot Indian Tribe v. FERC, 993 F.2d 1428, 1433 (9th Cir. 1993). Further, the Ninth
 3 Circuit has stated:

4 In general, we will not invoke the waiver rule in our review of a notice-and-comment
 5 proceeding if an agency has had an opportunity to consider the issue. This is true
 6 even if the issue was considered sua sponte by the agency or was raised by someone
 other than the petitioning party.

7 Portland General Elec. Co. v. BPA, 501 F.3d 1009, 1024, n. 13 (9th Cir. 2007) (“BPA sought broad
 8 public participation and invited comments in these proceedings. If we required each participant in a
 9 notice-and-comment proceeding to raise every issue or be barred from seeking judicial review of the
 10 agency's action, we would be sanctioning the unnecessary multiplication of comments and
 11 proceedings before the administrative agency. That would serve neither the agency nor the
 12 parties.”). Here, Plaintiffs stated in the petition that there was some evidence of two distinct
 13 ribbon seal populations (in the Okhotsk Sea and the Bering Sea), but that there was also evidence to
 14 the contrary. AR 1 at 11. The petition stated that additional research on ribbon seal stock structure
 15 was needed. Id. The petition also included several recommendations for further research, including
 16 one to identify populations and subpopulations of ribbon seals. AR 1 at 79.

17 Although Defendants argue that a reference to populations is not enough to trigger a DPS
 18 analysis, Plaintiffs raised the issue of the absence of and need for population data for ribbon seals in
 19 their petition. Thus, Portland General Electric supports the conclusion that there was no waiver.

20 **B. Merits**

21 The parties focus on the second prong of the discreteness analysis, that is:

22 (2) It is delimited by international governmental boundaries within which differences
 23 in control of exploitation, management of habitat, conservation status, or regulatory
 mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act.

24 61 Fed. Reg. 4722, 4725. Plaintiffs argue that there is ample evidence that this prong is satisfied, as
 25 management of species by Russia and the United States differs greatly. The Status Review states:

26 Commercial hunting of marine mammals is prohibited in US territorial waters by the
 27 MMPA and is not considered a threat to the species in this part of its range.
 28 However, the recent high commercial quotas set by Russia for ribbon seals are a
 potential risk. Regulations which govern commercial harvest of ice seals in Russia
 are over 20 years old and are artifacts from the former Soviet Union. Therefore, it is

1 unclear what mechanisms are currently in place in Russia to ensure that potential
2 commercial harvests remain within sustainable levels.

3 AR 11 at 79 (citation to authorities omitted). Plaintiffs argue that given the significant differences in
4 management of the species, NMFS should have considered whether those differences warranted
5 having a separate DPS for the ribbon seal.

6 Defendants argue, however, that even if there are regulatory differences between Russia and
7 the United States, those differences must be “significant in light of section 4(a)(1)(D)” of the ESA,
8 and in this case they are not. Section 4(a)(1)(D) refers to the inadequacy of existing regulatory
9 mechanisms as a factor to be considered in listing determinations. NMFS states that it considered
10 the current status of the Russian harvest of the ribbon seal and determined that even though quotas
11 are high, the actual harvest is low, so there is no real threat to the seal. AR 11 at 80, AR 13 at 6.

12 The entirety of NMFS’s analysis in the twelve-month finding about regulatory mechanisms is:

13 There is little evidence that the inadequacy of existing regulatory mechanisms
14 currently poses a threat to ribbon seals throughout all or a significant portion of their
15 range. However, there are no known regulatory mechanisms that effectively address
16 global reductions in sea ice habitat at this time. Also, it is unclear what regulatory
17 mechanisms are in place to ensure that potential commercial harvests in Russia are
18 conducted in a sustainable fashion.

19 73 Fed. Reg. at 79827. Thus, NMFS argues that, given the current and expected rate of Russian
20 harvest, there was no difference in regulatory mechanisms that were significant to the ribbon seal,
21 and any threats to the ribbon seal are only potential, whereas the DPS policy focuses on actual
22 threats. See AR 95 at 5 (“We base our listing decisions on the status of the species at that time, not
23 on some time in the future.”). The agency did not act arbitrarily or capriciously in concluding that
24 although Russia has a different regulatory mechanism in place regarding commercial harvest of the
25 ribbon seal, the actual threat to the ribbon seal is low and there is no evidence that existing
26 regulatory mechanisms are significant in light of § 1533(a)(1)(D).

27 Plaintiffs argue that another difference between Russia and the United States is significant,
28 although it points in the opposite direction: Russia has signed on to the Kyoto Protocol on
 greenhouse gases whereas the United States has not. However, it is not apparent that greenhouse
 gases stop at borders between nations, and Plaintiffs fail to explain how Russia’s agreement to some

1 controls on greenhouse gases means that its ribbon seal population faces a reduced risk compared to
2 those in American waters.

3 Plaintiffs also contend that there is precedent for dividing the Russian and United States
4 breeding populations of a species under the ESA. Specifically, the Alaskan breeding population of
5 the Stellar's eider is listed as threatened under the ESA, while the Russian population is not. See
6 Endangered and Threatened Wildlife and Plants; Threatened Status for the Alaska Breeding
7 Population of the Stellar's Eider, 62 Fed. Reg. 31748 (Jun 11, 1997). However, the fact that FWS
8 listed a distinct population segment in a case involving another species does not mandate a particular
9 result in this case. Defendants have adequately considered whether the international differences
10 warranted a finding of discreteness under the second prong of the NMFS policy.

11 **3. Foreseeable future**

12 NMFS was required to determine if the ribbon seal was a threatened species, which is
13 defined as: "any species which is likely to become an endangered species within the foreseeable
14 future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20). There is no
15 statutory definition of "foreseeable future," and the "definition of 'foreseeable future' may vary
16 depending on the particular species. . . ." See Western Watersheds Project v. Foss, 2005 WL
17 2002473, at *14, 16 (D. Idaho Aug. 19, 2005).

18 Here, NMFS determined the foreseeable future to be to the year 2050 because

19 past and current emissions of greenhouse gases have already largely set the course for
20 changes in the atmosphere and climate until that time, and because of enormous
21 uncertainty about future social and political decisions on emissions that will dominate
22 projection of conditions farther into the future. Beyond the year 2050, projections of
climate scenarios are too heavily dependant on socio economic assumptions and are
therefore too divergent for reliable use in assessing threats to ribbon seals.

23 AR 13 at 79823; see also AR 409 at 12 (study entitled Climate of the Arctic Marine Environment);
24 AR 276 at 3 ("By mid-century (2046-2065), the choice of scenario becomes important" and "By late
25 century (2090-2099), differences between scenarios are large."). NMFS stated in the twelve-month
26 finding that the foreseeable future determination used in this case was the same as used in the FWS's
27 decision to list the polar bear. Id.

28 Plaintiffs argue that NMFS violated the ESA by limiting the foreseeable future to 2050 and

1 by not considering impacts to the end of the century because NMFS:

2 (1) irrationally dismissed universally-accepted Intergovernmental Panel on Climate
3 Change (IPCC) climate scenarios as too variable to be foreseeable; (2) illegally relied
4 on uncertain future regulatory measures to conjure a false appearance of uncertainty;
5 (3) disregarded the fact that all climate scenarios are worse for the ribbon seal after
6 2050; (4) ignored the frequent prior use of timeframes of 100 years or more to
determine species status; (5) instituted a standard by which ribbon seals will be
doomed to extinction before ESA protections can kick in; and (6) arbitrarily ignored
ocean acidification impacts beyond 2050 that NMFS itself has foreseen.

7 See Pls.’ Mot. at 16; Pls.’ Reply at 14. Defendants argue that 2050 is the proper cutoff date for the
8 foreseeable future because the chief potential threat to ribbon seals is global climate change, and
9 because of the general scientific consensus that climate projections past mid-century rapidly
10 deteriorate in reliability. See AR 11 at 40; AR 85 at 15 (polar bear listing decision); 75 Fed Reg.
11 6438, 6456-57, 6462-63 (Feb. 9, 2010) (not listing the American pika based on climate change
12 considerations).

13 **A. Deference under Skidmore or Chevron**

14 Defendants argue that they are entitled to deference under Chevron v. Natural Res. Def.
15 Council, 467 U.S. 837 (1984) and/or Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944) for their
16 interpretation of “foreseeable future” in this case. Judicial review of an agency’s interpretation of a
17 statute is governed by the two-part formula announced in Chevron. A court reviewing an
18 administrative interpretation of a statute must first ask “whether Congress has directly spoken to the
19 precise question at issue.” Chevron, 467 U.S. at 842. If the statute is unambiguous, then the court
20 “must give effect to the unambiguously expressed intent of Congress” regardless of the agency’s
21 view. Id. at 843. However, if the statute is silent or ambiguous with respect to the specific issue,
22 then a court must defer to the agency’s interpretation unless that interpretation is unreasonable. Id. at
23 843-44; United States v. Mead Corp., 533 U.S. 218, 229 (2001). Under Chevron:

24 [i]f Congress has explicitly left a gap for an agency to fill, there is an express
25 delegation of authority to the agency to elucidate a specific provision of the statute by
26 regulation. Such legislative regulations are given controlling weight unless they are
arbitrary, capricious or manifestly contrary to the statute.

27 Chevron, 467 U.S. at 844.

28 Here, Defendants argue that Congress left an “explicit gap” for an agency-promulgated

1 regulation that NMFS filled when it interpreted “foreseeable future” in this case, especially since the
2 term was subject to public notice and comment. However, the definition of foreseeable future as
3 ending in 2050 in the context of climate regulations and the Bering and Okhotsk Seas at issue in this
4 suit is not the kind of “legislative regulation” addressed by Chevron because its application is
5 limited to this case.

6 “If Chevron deference is inapplicable because Congress has not delegated interpretative
7 authority to the agency, the agency’s views still ‘constitute a body of experience and informed
8 judgment to which courts and litigants may properly resort for guidance.’” Skidmore, 323 U.S. at
9 140. “Levels of deference given to agency statutory interpretations vary with the circumstances, and
10 as the level of deference that a court is required to give increases, so too does the tolerable marginal
11 difference between a court and an agency’s interpretations.” Hawaii ex rel. Atty. Gen. v. Fed.
12 Emergency Mgmt. Agency, 294 F.3d 1152, 1158 (9th Cir. 2002). The precise degree of deference
13 warranted depends on the statute and agency action at issue. Mead, 533 U.S. at 227-31. Factors
14 affecting the level of deference given to an agency’s interpretation include “the degree of the
15 agency’s care, its consistency, formality, and relative expertness, and the persuasiveness of the
16 agency’s position.” Id. at 228 (citations and footnotes omitted). The cases upon which Defendants
17 rely instead address formal policies or criteria used to evaluate all kinds of petitions, not the specific
18 interpretation of a term in the context of a single petition. See, e.g., Northwest Ecosystem Alliance
19 v. FWS, 475 F.3d 1136, 1141 (9th Cir. 2007).

20 **B. Intergovernmental Panel on Climate Change (IPCC) climate scenarios**

21 Plaintiffs argue that sea ice decline is foreseeable to the end of this century based on the fact
22 that the IPCC has provided climate change projections through 2100 under a range of possible
23 emissions scenarios. AR 874. The IPCC’s report states, among other things:

24 Advances in climate change modeling now enable best estimates and *likely*
25 uncertainty ranges to be given for projected warming for different emission scenarios.
26 Results for different emission scenarios are provided explicitly in this report to avoid
27 loss of this policy-relevant information. Projected global average surface warmings
28 for the end of the 21st century (2090-2099) relative to 1980-1990 are shown in Table
SPM.3.

AR 874 at 13 (emphasis in original). There are other references in the report regarding climate

1 projections to 2100. See, e.g., AR 874 at 13, 14, 15, 16. Plaintiffs argue that NMFS cannot ignore
 2 this modeling even if it is not perfect. See Defenders of Wildlife v. Babbitt, 958 F. Supp. 670, 679
 3 (D. D.C. 1997) (“The statute contains no requirement that the evidence be conclusive in order for a
 4 species to be listed. Application of such a stringent standard violates the plain terms of the statute,
 5 and therefore justifies reversal of the agency's decision. . . . the ESA. Congress repeatedly explained
 6 that it intended to require the FWS to take preventive measures before a species is “conclusively”
 7 headed for extinction.”); Southwest Center for Biological Diversity v. Babbitt, 215 F.3d 58, 60 (D.C.
 8 Cir. 2000) (“ . . . 16 U.S.C. § 1533(b)(1)(A) ‘merely prohibits the Secretary from disregarding
 9 available scientific evidence that is in some way better than the evidence he relies on. Even if the
 10 available scientific and commercial data were quite inconclusive, he may - indeed must - still rely on
 11 it at that stage.”). Plaintiffs argue that, based on the IPCC report, the effects of climate change on
 12 species over a 100-year time frame are and should be routinely analyzed. AR 934. However, even
 13 the evidence cited by Plaintiffs on this point focuses on changes by 2050, and only has one reference
 14 to projections to 2100. AR 934 at 3 (“These scenarios would diverge even more by 2010.”).
 15 Further, there is other evidence stating that forecasting beyond 2050 is unreliable. See, e.g., AR
 16 276.

17 Defendants counter that, far from ignoring the IPCC report, the Status Review quotes from
 18 and relies on the reasoning in the IPCC report (AR 276). The report states that climate models until
 19 2050 are in agreement and are not really affected by different scenarios. AR 11 at 41 (“ . . . about
 20 half of the early 21st-century warming is committed in the sense that it would occur even if
 21 atmospheric concentrations were held fixed at year 2000 values.”) (citing AR 276 at 3). The IPCC
 22 also stated:

23 By mid-century (2046-2065), the choice of scenario becomes more important for the
 24 magnitude of multi-model globally averaged SAT warming . . . About a third of that
 25 warming is projected to be due to climate change that is already committed. By late
 century (2090-2099), differences between scenarios are large, and only about 20% of
 that warming arises from climate change that is already committed.

26 AR 11 at 41 (citing AR 276 at 3).

27 Thus, Defendants are correct that NMFS did not disregard IPCC climate modeling, but
 28 instead cited it in the Status Review. In the twelve-month finding, NMFS states that its reason for

1 choosing 2050 as the foreseeable future is that climate models after that time are too heavily
2 dependant on socio-economic assumptions and are therefore unreliable for use in assessing threats to
3 the ribbon seal. AR 13 at 79823. Further, the record shows that NMFS actually did consider a
4 significant amount of climate science that included projections to 2100 or later. See, e.g., AR 11 at
5 63 (discussing sea ice coverage during decade from 2075-2084); AR 276 at climate projections
6 through 2200); AR 316 ocean acidification projections through 2100); AR 319 at 4 (sea ice
7 projections through 2100); 352 at 4 (climate projections through 2084); AR 409 at 12 (projections to
8 2100).

9 Plaintiffs have not shown that NMFS's reasons for designating 2050 as the foreseeable future
10 were arbitrary and capricious. Specifically, the IPCC addressed warming after 2050, but since there
11 was little reliability, NMFS did not err in determining that models after 2050 were too variable to be
12 part of the foreseeable future. Moreover, even if there is some evidence demonstrating that the
13 foreseeable future should extend beyond 2050 in this case, there is no indication that NMFS's
14 decision was so implausible that it would not be entitled to deference. See Motor Vehicle
15 Manufacturers Association, 463 U.S. at 43.

16 C. Uncertain future regulatory measures

17 The ESA requires agency decisions to be made based on consideration of "existing
18 regulatory measures." 16 U.S.C. § 1533(a)(1)(D). Plaintiffs argue that NMFS erred in relying on
19 climate models that assumed different greenhouse gas emission scenarios which rely on some type
20 of regulatory control in the coming years. Specifically, Plaintiffs argue that regulatory control of
21 greenhouse gas emissions is extremely uncertain, so NMFS could not rely on such tentative future
22 measures in modeling changes to the sea ice habitat, but should instead have only used "business-as-
23 usual" scenarios. See Center for Biological Diversity v. Badgley, 2001 U.S. Dist. LEXIS 9612 (D.
24 Or. June 28, 2001) ("Courts have specifically and repeatedly interpreted this provision to mean that
25 an agency may not rely upon future actions to justify a decision not to list a species as threatened or
26 endangered.").

27 Defendants, however, counter that they did not choose among climate scenarios but instead
28 relied on the agreement of all modeling through 2050 that greenhouse gas emissions lead to the same

1 result. See AR 13 at 2 (“Beyond the year 2050, projections of climate scenarios are too heavily
2 dependent on socio economic assumptions and are therefore too divergent for reliable use in
3 assessing threats to ribbon seals.”) AR 409 at 12 (graph showing projections to 2100, some
4 showing great warming and others showing a leveling off). NMFS acknowledged that “there are no
5 known regulatory mechanisms that effectively address reductions in ribbon seals’ sea ice habitat, or
6 other effects of global climate change.” AR 11 at 79. The NMFS concluded that:

7 There is no evidence that the inadequacy of existing regulatory mechanisms currently
8 poses a threat to ribbon seals. However, there are no known regulatory mechanisms
9 which effectively address reductions in sea ice habitat at this time. Also, it is unclear
10 what regulatory mechanisms are in place to ensure that potential Russian commercial
11 harvests remain within sustainable levels.

12 AR 11 at 83.

13 The NMFS determined that 2050 was the foreseeable future because past and current
14 emissions have largely set the course for changes in climate until that time. AR 11 at 9. Then,
15 NMFS examined several models for ice cover in the Bering Sea, and then used the ones that best fit
16 historic ice coverage to project future ice coverage. AR 11 at 53-55. Defendants also note that there
17 are two sources of uncertainty in modeling, that is, the concentration of greenhouse gas emissions
18 and the composition of the model. AR 409 at 11-12. The record shows general agreements in
19 models until 2050, and a great divergence thereafter. AR 409 at 12. Thus, NMFS did not err in
20 determining that future regulatory measures did not justify extending the foreseeable future beyond
21 2050.

22 **D. Climate scenarios worsen after 2050**

23 Plaintiffs argue that NMFS failed to consider the fact that all climate scenarios continue to
24 worsen after 2050 in terms of warming and sea ice loss, and that there is no climate model that
25 predicts a decrease in warming or increase in sea ice after 2050. AR 237 at 14, Figure SPM.5
26 (showing graph of models, all of which show increase in global warming through 2100). Plaintiffs
27 argue that therefore, the ribbon seal will continue to lose its habitat under all scenarios through 2100.
28 Plaintiffs argue that it was error for NMFS to disregard the obvious conclusion that ribbon seals will
29 become endangered just because the agency cannot pinpoint the exact time of extinction.

30 Defendants respond that Plaintiffs conflate global scenarios showing an increase in global

1 warming (AR 237 at 14) with regional predictions (AR 409 at 12). Moreover, Defendants argue that
2 in a paper entitled Climate of the Arctic Marine Environment by John Walsh, the author found that
3 not all climate scenarios are worse after 2050. AR 409. Specifically, Defendants point to the blue
4 “M” figures on the graph at page 12 of the Walsh paper, which are concentrated at the 1 degree line
5 in 2050, but then dip down below that line after 2050. AR 409 at 12. Although there are some “M”
6 figures below the 1 degree line, an examination of all of the “M” figures in general shows an upward
7 trend. The “M” trend does not support NMFS’s argument that “at least a substantial number of
8 IPCC models indicate potential temperature decline in the Arctic and sub-Arctic between 2050 and
9 2100.” See Defs.’ Cross-Mot. at 33.

10 Defendants note that the Walsh paper (AR 409) states that projected warming by 2050 is 1 to
11 4.5 degrees C, whereas projected warming at 2100 is anywhere from 2 to 9 degrees C. AR 409 at
12 12. Thus, Defendants argue that Walsh shows that projections for 2100 allow for the improvement
13 of the climate scenario between 2050 and 2100, contrary to Plaintiffs’ argument that all climate
14 projections are worse after 2050. Defendants’ argument is not well-taken. Even taking the lowest
15 possible increase given those parameters, that is, an increase in temperature of 1 degree before 2050
16 and then an additional 2 degrees thereafter from 2050 to 2100, there would still be an increase in
17 temperature in both periods, albeit at a lower rate in the second one.

18 Even though NMFS could have reasonably concluded that further warming out to the year
19 2100 is likely, in light of the increasing uncertainty of predictions farther into the future and the
20 deference accorded to the agency’s expertise, on balance, the agency’s decision was not arbitrary or
21 capricious.

22 **E. 100-year time frame used in other decisions**

23 Plaintiffs also argue that federal agencies regularly use 100-year time frames in making
24 listing decisions. However, Plaintiffs concede that the length of time that constitutes the
25 “foreseeable future” for listing purposes may vary depending on the species and the threats it faces.
26 See Pls.’ Reply at 20; see also Western Watersheds Proj. v. Foss, 2005 U.S. Dist. LEXIS 45753, at
27 *44 (D. Idaho Aug. 19, 2005). For example, different species may differ in their adaptability, such
28 as their ability to successfully relocate out of their traditional habitat. As described below,

1 Plaintiffs' reliance on decisions involving other species does not show that NMFS was arbitrary and
2 capricious in this instance.

3
4 **1. Polar bear**

5 Plaintiffs argue that the FWS used climate change projections over a period of 100 years to
6 inform its decision to determine that the polar bear was threatened. See AR 85 (Endangered and
7 Threatened Wildlife and Plants; Determination of Threatened Status for the Polar Bear Throughout
8 its Range, 73 Fed. Reg. 28212 (May 15, 2008)); id. at 62 ("Projections of polar bear status based on
9 habitat availability were determined for each of the four ecoregions for 4 time periods: the present
10 (year 0); 45 years from the present (the decade of 2045-2055); 75 years from the present (the decade
11 2070-2080) and 100 years (2090-2100) from the present."). Another study in the polar bear decision
12 looked to 2100 to analyze impacts on the polar bear. See AR 85 at 60-61.

13 However, the FWS actually used a mid-century date (forty-five years) for the foreseeable
14 future for the polar bear decision. See AR 85 at 19. Also, like the ribbon seal decision, the polar
15 bear decision considered climate issues beyond the forty-five year time frame. The foreseeable
16 future analysis in the ribbon seal decision is not inconsistent with the polar bear decision.

17 **2. Recovery plans**

18 Plaintiffs also argue that FWS and NMFS have used 100-year or more time frames when
19 assessing the status of species. Specifically, Plaintiffs point to the recovery plans for the Stellar's
20 eider, the Mount Graham red squirrel, the Utah prairie dog and the North Atlantic right whale. In
21 the eider plan, FWS stated that the eider would be delisted when it had a less than 1% probability of
22 extinction in the next 100 years. AR 1 at 22-23; AR 933 at 21. FWS also stated that the eider would
23 be reclassified as endangered when it had a less than 20% probability of extinction in the next 100
24 years for three consecutive years. Id. With respect to the red squirrel, FWS stated that at least 100
25 to 300 years will be needed to restore the squirrel's habitat. See AR 933 at 22. With respect to the
26 prairie dog, FWS defined the delisting criteria as "to establish and maintain the species as a self-
27 sustaining, viable unit with retention of 90 percent of its genetic diversity for 200 years." AR 933 at
28 10. NMFS stated with respect to the right whale that: "given the small size of the North Atlantic

1 population, downlisting to threatened may take 150 years even in good conditions.” AR 933 at 13.

2 Recovery plans, however, are not listing decisions and do not address the foreseeable future
3 analysis that is at issue here. Plaintiffs argue that a recovery plan must set out “objective,
4 measurable criteria which, when met, would result in a determination, in accordance with the
5 provision of this section [the listing criteria], that the species be removed from the list.” 16 U.S.C. §
6 1533(f)(1)(B)(ii). Even so, the time frames in the recovery plans are not based on the “foreseeable
7 future” requirement.

8 3. Penguins

9 Plaintiffs argue that FWS’s decision regarding several species of penguins examined climate
10 science and sea ice scenarios over a 100-year time frame. See Endangered and Threatened Wildlife
11 and Plants; 12-Month Finding on a Petition To List Four Penguin Species as Threatened or
12 Endangered Under the Endangered Species Act and Proposed Rule To List the Southern
13 Rockhopper Penguin in the Campbell Plateau Portion of Its Range, 73 Fed. Reg. 77,264 (Dec. 18,
14 2008). The penguin decision, however, addresses the Antarctic, not the sub-Arctic area at issue in
15 this case. The decision does not appear to adopt a 100-year time frame in general, but does state,
16 with respect to the Emperor penguin, that the FWS examined conditions around Antarctica for the
17 next 100 years, and found that the Emperor penguin’s habitat requirements would be met for that
18 time frame. However, that decision also specifically recognizes the uncertainty of large-scale
19 predictive models and an absence of fine-scale models for the Emperor penguin’s habitat, and
20 concerns a different location.

21 4. Southern Resident killer whale/Cook Inlet beluga whale

22 Plaintiffs argue that NMFS listed the killer whale as endangered based on a risk assessment
23 extended to 300 years. See Endangered and Threatened Wildlife and Plants: Endangered Status for
24 Southern Resident Killer Whales, 70 Fed. Reg. 69903 (Nov. 18, 2005). In that decision, NMFS
25 examined two models for viability and found that the probability of extinction of the killer whale
26 increased when looking at 100 years to 300 years. Id. at 69909. The NMFS made a similar
27 conclusion with respect to the beluga whale. See Endangered And Threatened Species; Endangered
28 Status for the Cook Inlet Beluga Whale, 73 Fed. Reg. 62919 (Oct, 22, 2008).

1 However, the different time frames there were functions of the different threats to the
2 species, and cannot be simply used for another species. Further, there is no indication that these
3 whale species rely on sea ice like the ribbon seal.

4 **F. Delay of protection of ribbon seal**

5 Plaintiffs argue further that deferring protection of the ribbon seal until some time in the
6 future will effectively condemn the species to extinction. Specifically, Plaintiffs argue that habitat
7 destruction from global warming is unique in that habitat will continue to degrade even if all
8 greenhouse gas emissions are stopped. Plaintiffs point to evidence from climate scientists that
9 emissions already released into the atmosphere have committed the world to up to 2 degrees C of
10 warming, of which 0.6 degrees C will likely be experienced during this century, AR 90 at 5-6,
11 without even considering the effect of future gas emissions.

12 Defendants counter that Plaintiffs invert the proper analysis, which is for NMFS to determine
13 the foreseeable future based on the best scientific evidence available, rather than defining the
14 “foreseeable future” based on a pre-determined outcome. See Western Watersheds Proj. v. Foss,
15 2005 WL 2002473, at *17 (D. Idaho Aug. 19, 2005) (“However, under the particular facts of this
16 case, the Court finds that the FWS acted arbitrarily and capriciously when it concluded that a 64
17 percent chance of extinction within the next 0-100 years did not meet the statutory definition of
18 ‘threatened.’ A mere statement that the conservation agreement ‘will postpone the projected time
19 when the species has a high risk of extinction to beyond the foreseeable future,’ without first
20 delineating how the FWS managers defined foreseeable future, does not suffice-especially when the
21 conclusion contradicts the recommendation of its own expert, the IUCN, and the conclusions of
22 other scientists who have assessed the gravity of a particular extinction risk in other cases.”).
23 Further, NMFS designated the ribbon seal as a “Species of Concern,” which permits NMFS to act
24 quickly if new information comes to light or NMFS’s projections are disproved. AR at 13 at 7
25 (“This will serve to (1) increase public awareness about the species; (2) further identify data
26 deficiencies and uncertainties in the species' status and the threats it faces; (3) and stimulate
27 cooperative research efforts to obtain the information necessary to evaluate the species' status and
28 threats. As resources permit, we will conduct further studies of ribbon seal abundance and status.

1 We will evaluate results of these and any other studies that may be conducted and undertake a new
2 status review, if warranted.”). Thus, this listing decision is not necessarily the last word on the
3 ribbon seal. Accordingly, Plaintiffs have not shown that NMFS acted arbitrarily and capriciously in
4 deferring protection.

5 **G. Ocean acidification**

6 Ocean acidification occurs when the ocean absorbs carbon dioxide, which reacts with
7 carbonate ions in water to form carbonic acid. AR 189 at 3. Thus, the more carbon dioxide in the
8 atmosphere, the more carbonic acid in the ocean and the fewer carbonate ions available for the
9 growth of carbonate-forming organisms, including plankton and coral, which need carbonate ions.

10 Id. at 5.

11 Approximately 30-50% of global anthropogenic carbon dioxide emissions are absorbed by
12 the world’s oceans. AR 11 at 56. The world’s oceans store about fifty times more carbon dioxide
13 than the atmosphere (AR 1 at 67) and most carbon dioxide released into the atmosphere from the use
14 of fossil fuels will eventually be absorbed by the ocean. AR 149 at 1. As the ocean absorbs carbon
15 dioxide from the atmosphere, it changes the chemistry of the sea water by lowering its pH, which
16 causes acidification. AR 1 at 67. Surface ocean pH has already dropped by about 0.1 units on the
17 pH scale. AR 903 at 1. The pH of the ocean is currently changing at a rate 100 times anything seen
18 in millennia, and may drop by another 0.3 or 0.4 units by the end of this century, which is a 100-
19 150% increase in acidity. Id.; AR 276 at 47.

20 Squid, along with fish and crustaceans, is a prey species for the ribbon seal (AR 11 at 34-35,
21 52), and is especially vulnerable to ocean acidification because of its high energy swimming method
22 and high metabolism rate. AR 255 at 23; AR 366 at 4. Increasing acidification of the sea water
23 reduces the availability of carbonate ions that many marine species rely on to build their shells and
24 skeletons. AR 189 at 5-6. Further, the North Pacific ocean has less favorable conditions for
25 calcification, harming calcifying organisms that serve as the base of the food web. AR at 825 at 22.
26 Plaintiffs argue that acidification will therefore have a cascading effect on other species that rely on
27 these organisms and ultimately harm the ribbon seal’s prey. Defendants respond that it is not clear
28 what effect acidification will have on the ribbon seal’s food supply because its diet is “ecologically

1 and trophically diverse.” AR 11 at 96.

2 In the Status Review, the BRT found that “there is no scientific consensus or prevailing
3 theory about what scenarios [for ocean acidification] are most likely.” AR 11 at 62. NMFS stated
4 that the data indicated that the saturation horizon for aragonite, a form of calcium carbonate, was at
5 about the depth of 200 meters in the North Pacific, and that this horizon was projected to reach the
6 surface during the 21st century, but not before 2050. AR 11 at 56; AR 178 at 14. The Status
7 Review states: “The saturation horizon is projected to reach the surface of the North Pacific Ocean
8 during the 21st century. At that point, a wide range of North Pacific species will be exposed to
9 corrosive waters.” AR 11 at 56. NMFS stated that the main source of uncertainty in acidification
10 models is future emissions scenarios. AR 11 at 67 (“[T]he major effects of ocean acidification may
11 not appear until the latter half of this century.”). Thus, NMFS set the foreseeable future for
12 acidification at 2050 for the same reason it did so with respect to sea ice changes, stating:

13 The greatest uncertainty in projections of ocean acidification stems from uncertainty
14 in the global GHG emissions scenario, as it does for climatic and sea-ice projections.
15 Following the same logic as in Section 4.1, the foreseeable future for ocean
16 acidification is determined by the duration of influence of recent and current
17 emissions, out to about 2050. Although the North Pacific Ocean is predicted to be
one of the first areas where aragonite undersaturation will reach the surface, this is
not likely to occur before 2050 (Orr et al., 2005). Nevertheless, there is considerable
scope for ecosystem impacts prior to undersaturation actually reaching the surface.

18 AR 11 at 57. NMFS concluded that impacts to the ribbon seal from acidification was “extremely
19 uncertain.” AR 11 at 67; see also AR 189 at 2 (stating that ocean acidification affects ocean
20 ecosystems in ways “we are only beginning to understand.”); AR 316 at 5 (“Assessing these impacts
21 is impeded by the scarcity of relevant data.”); AR 178 at 14 (“the biological impacts of ocean
22 acidification on marine fauna are only beginning to be understood.”).

23 Plaintiffs argue that NMFS’s foreseeable future cutoff date is arbitrary and capricious
24 because it disregards foreseeable threats from ocean acidification beyond 2050. Specifically,
25 Plaintiffs point to NMFS’s statements that the saturation horizon is projected to reach the surface of
26 the North Pacific Ocean, and at that point species “will be exposed to corrosive waters.” AR at 56.
27 Further, “the impact of acidification on the lower trophic level has direct implications for the forage
28 base of ribbon seals.” AR at 57. Finally, Plaintiffs point to NMFS’s conclusion that: “Because of

1 ribbon seals' apparent dietary flexibility and because the major effects of ocean acidification may
2 not appear until the latter half of this century, this threat should be of less immediate concern than
3 the direct effects of potential sea ice degradation." AR at 57. Plaintiffs argue that even if NMFS
4 rationally chose a 2050 cutoff date for sea ice melt impacts, it arbitrarily truncated its analysis of
5 ocean acidification to that same date. Plaintiffs point to an unsigned, draft, version of FWS
6 guidelines for interpreting "foreseeable future," in which the author concludes, among other things,
7 that ". . . the Secretary may be able to make reliable predictions for different amounts of time with
8 respect to different threats. Thus, the Secretary need not identify a single 'foreseeable future' for the
9 species." AR 616a at 9.

10 Defendants respond that Plaintiffs' arguments fail because they conflate the greater certainty
11 of acidification with the uncertainty of its effects on ribbon seals. Defendants emphasize that the
12 current knowledge on ocean acidification is in its infancy, and is changing rapidly. AR 178 (new
13 research on acidification released after Status Review). The Status Review recognized this (AR 11
14 at 67), as did the twelve-month finding (AR 13 at 79826). NMFS also found that the biggest
15 variable in ocean acidification is future emissions. AR 11 at 57.

16 It would also have been reasonable to NMFS to determine that undersaturation in the North
17 Pacific Ocean was likely to occur before 2050 given that the Status Review states that there is
18 "considerable scope of ecosystem impacts prior to undersaturation actually reaching the surface."
19 AR 11 at 57. However, in light of the uncertainty of the progress of acidification and its impact on
20 ribbons seals and NMFS's finding that the biggest cause of acidification is greenhouse gas
21 emissions, which are also uncertain, as well as the deference accorded to an agency's expertise, it
22 was not arbitrary and capricious for NMFS to choose 2050 as the foreseeable future.

23 **4. Best available scientific evidence**

24 The ESA required NMFS to base its listing determination on the "best scientific and
25 commercial data available." 16 U.S.C. § 1533(b)(1)(A). The best available data requirement
26 "merely prohibits [an agency] from disregarding available scientific evidence that is in some way
27 better than the evidence [it] relies on." Southwest Center for Biological Diversity v. Babbitt, 215
28 F.3d 58, 60 (D.C. Cir. 2000); Kern County Farm Bureau v. Allen, 450 F.3d 1072, 1080 (9th Cir.

1 2006) (citing Southwest Center). In short, an agency “cannot ignore available biological
 2 information.” Conner v. Burford, 848 F.2d 1441, 1454 (9th Cir. 1988). “Reliance on the best
 3 available scientific evidence, as opposed to requiring absolute scientific certainty, ‘is in keeping
 4 with congressional intent’ that an agency ‘take preventative measures *before* a species is
 5 “conclusively” headed for extinction.” Center for Biological Diversity v. Lohn, 296 F. Supp. 2d
 6 1223, 1236 (W.D. Wash. 2003) (quoting Defenders of Wildlife v. Babbitt, 958 F. Supp. 670, 679-80
 7 (D. D.C. 1997) (emphasis in original)); see also Lands Council v. McNair, 537 F.3d 981, 993 (9th
 8 Cir. 2008) (a reviewing court should not “assess the quality and detail of on-site analysis and make
 9 ‘fine-grained judgments of its worth.’”).

10 Further, “an agency is not obliged to conduct independent studies to improve upon the best
 11 available science or to resolve inconclusive aspects of the scientific information.” Center for
 12 Biological Diversity, 296 F. Supp. 2d at 1236 (citing Southwest Center for Biological Diversity v.
 13 Babbitt, 215 F.3d 58, 61 (D.C. Cir. 2000) (“The District Court’s responsibility was to assess the
 14 evidence and resolve the parties’ dispute. The court’s decision to sidestep this responsibility by
 15 imposing an obligation upon the Secretary to find better data was error.”)); see also Trout Unlimited,
 16 559 F.3d at 956 (“We will not second-guess NMFS’s resolution of this scientific question. . . . Trout
 17 Unlimited and NMFS are engaged in a good faith disagreement that is supported by science on both
 18 sides; indeed, the amicus brief filed in this case argues that there is no scientific consensus
 19 concerning the relationship between hatchery and natural fish. In such situations, we stay our
 20 hand.”); Greenpeace Action v. Franklin, 14 F.3d 1324, 1336 (9th Cir. 1992) (“When an agency
 21 relies on the analysis and opinion of experts and employs the best evidence available, the fact that
 22 the evidence is ‘weak,’ and thus not dispositive, does not render the agency’s determination
 23 ‘arbitrary and capricious.’”).

24 Here, Plaintiffs contend that NMFS violated the ESA’s best available scientific evidence
 25 requirement by failing to discuss three aspects of the best available science: (1) sea ice loss and
 26 changes to the Sea of Okhotsk; (2) monthly declines in sea ice in the ribbon seals’ global range; and
 27 (3) changes in the quality and character of sea ice in the ribbon seals’ overall range.

28 **A. Sea ice loss and changes in the Sea of Okhotsk**

1 Plaintiffs argue that Defendants failed to consider the Meier study (2007) documenting past
2 sea-ice declines in the Okhotsk Sea, and the Overland and Wang study (2007) documenting future
3 declines in the sea ice there. The Meier study reported a decline in sea ice coverage in the Sea of
4 Okhotsk for the period from 1979 to 2006 in all months in which ice is usually found there. AR 890
5 at 4. At least one study has shown that the rate of decline for the Okhotsk Sea in the Meier study is
6 more than the overall rate of decline of Arctic summer sea ice. AR 932 at 1. Plaintiffs argue that
7 instead of using this available data, NMFS limited its conclusion about the Okhotsk Sea in the Status
8 Review to one sentence: “As this region is dominated by cold air masses for much of the winter and
9 spring, we would expect the present seasonal cycle of first year sea ice to continue to dominate the
10 future habitat of the Sea of Okhotsk, similar to the Bering Sea.” AR 11 at 55.

11 Defendants counter that NMFS conducted a new analysis of sea ice trends in the Okhotsk,
12 including a paper published by its climate scientist, Wang, that set forth the state of the art of
13 modeling in sub-Arctic seas and reached a different conclusion than Meier. AR 410 (Wang study,
14 2007). The Wang study reported that “negative sea-ice anomalies since the late 1990s are apparent
15 for all but the Sea of Okhotsk.” AR 410 at 15. The Wang study concluded that: “Reduced sea-ice
16 areas are seen over three out of four (except the Sea of Okhotsk) sub-arctic seas in recent decades,
17 particularly after 2000 based on combined in situ and satellite observations.” AR 410 at 1. NMFS
18 argues that the agency’s understanding changed when the best available science changed, and so it
19 followed the Wang study.

20 Plaintiffs note that the Wang study stated that: “caution must be used in interpretation of the
21 sea-ice data. For example, the sudden jump in sea-ice area from 1978 to 1979 over Sea of Okhotsk
22 must be due to the introduction of satellite data into the analysis.” AR 410 at 15. Although
23 Plaintiffs argue that the Wang analysis is unreliable for the Okhotsk Sea prior to 1979, and that the
24 Meier study used only post-1979 data, and therefore, is more reliable. However, NMFS does not
25 rely on the Wang study for pre-1979 data. Further, even though the Wang study used pre-1979 data,
26 its conclusions are also based on more recent data, like the Meier study.

27 Further, Defendants argue that NMFS actually analyzed the same data used by Meier in the
28 2007 Overland and Wang paper and in the climate modeling NMFS did for this case, which was

1 based on the Overland and Wang study. AR 890 at 1 (Meier study used data from NASA Goddard
2 Center); AR 319 at 3 (Overland and Wang study used data from National Ice Data Center and the
3 Hadley Center); AR 382 at 16 (Stabeno and Overland study used NASA Goddard Center data); but
4 see AR 410 at 3-4 (Wang study used Hadley Center and NCEP/NCAR data). Defendants argue that
5 to the extent that the Wang and Meier studies are inconsistent, it is because they used different data
6 sets.

7 Defendants also contend that the Status Review examined the data used by Meier, and that,
8 in any event, Meier did not contain any forward-looking data, so the report was of limited value for
9 the analysis of the “foreseeable future.” As described above, there has been no showing that
10 Defendants ignored the Meier study in reaching the ribbon seal decision. Further, there is evidence
11 that Defendants used the same data for climate modeling that Meier did.

12 Plaintiffs also argue that Defendants failed to consider the Overland and Wang study from
13 2007. AR 319. The Overland and Wang study finds “considerable evidence for loss of sea ice area
14 of greater than 40% by 2050 in summer for the marginal seas of the Arctic basin,” and “[w]ith less
15 confidence, we find that the Bering, Okhotsk and Barents Seas have a similar 40% loss of sea ice
16 area by 2050 in winter.” AR 319 at 1.

17 As described above in connection with the “significant portion of the range” issue,
18 Defendants have considered the Overland and Wang paper because they conducted their own more
19 recent study using the same procedure as the earlier Overland and Wang paper, and the lead author
20 was one of the same scientists, Overland, who conducted the earlier study on which Plaintiffs rely.
21 AR 11 at 53 (“We have used the same procedure as in Overland and Wang (2007) for summer and
22 winter sea ice extents to assess the confidence for using IPCC climate models to project April and
23 May first-year sea ice extents for the eastern Bering Sea.”). NMFS’s study found that: “Model
24 results suggest that April will always have an ice cover for the next 40 years, while May will have
25 some years with considerable sea ice cover and some years with reduced ice cover, not unlike the
26 climatological record.” AR 11 at 53. The Status Review then concludes: “we would expect the
27 present seasonal cycle of first year sea ice to continue to dominate the future habitat of the Sea of
28 Okhotsk, similar to the Bering Sea.” AR 11 at 55.

1 Defendants also point to another paper that reviewed sea ice formation dynamics in the
2 Okhotsk, which was cited in the Status Review. AR 11 at 55. The Sasaki study (AR 347) addressed
3 sea ice in the sub-Arctic area, and did, as stated in the Status Review, find that sea ice is formed
4 rapidly and southward.

5 Thus, although the Status Review and the twelve-month finding did not specifically discuss
6 the Overland and Wang 2007 report, Defendants used the same procedure and one of the same
7 scientists, Overland, who analyzed his own prior work. Under these circumstances, Defendants did
8 not act arbitrarily and capriciously.

9 **B. Failure to quantify past declines and project future declines in monthly sea ice**

10 Plaintiffs argue that Defendants failed to quantify past declines on a monthly basis and
11 project future declines in monthly sea ice extent for the months of March through July, which are
12 critical for the ribbon seal. Figure 9 of the Status Review (AR 11 at 51) shows average sea ice for a
13 six-month period (December through May) by year. Plaintiffs argue that it is impossible to
14 determine the availability of sea ice for the specific months most critical for ribbon seals, March
15 through May. Further, Figure 10 indicates that sea ice disappeared from the Bering Sea by May in
16 1996, 2003 and 2004, which is the peak of the molting, breeding and pup maturing times. AR 11 at
17 52; see also AR 11 at 27 (Figure 6 showing annual timing of ribbon seal's ice-associated life).
18 Plaintiffs contrast Figure 11, which shows observed sea ice extent in the Northern Bering Sea in the
19 specific months of April, May and June from 1950 to 2008 (and beyond). Plaintiffs argue that
20 NMFS failed to consider past sea ice loss in the months of March through July, and the increasing
21 frequency of minimal sea ice in May and June.

22 The Status Review, however, acknowledged that, historically, inter-annual variations of sea
23 ice have occurred, but that "the late March to early May period in which the peak of ribbon seal
24 reproduction occurs will continue to have substantial ice for the foreseeable future." AR 11 at 63;
25 AR 13 at 4 ("While there may be more frequent years in which sea ice coverage is reduced, the late-
26 March to early-May period in which the peak of ribbon seal reproduction occurs will continue to
27 have substantial ice for the foreseeable future."); see also AR 11 at 53 ("Model results suggest that
28 April will always have an ice cover for the next 40 years, while May will have some years with

1 considerable sea ice cover and some years with reduced ice cover, not unlike the climatological
2 record.”). Further, there is evidence that the sub-Arctic sea ice always melts during the spring and
3 summer, as has historically been the case. AR 382 at 5; AR 319 at 2. There is also evidence that
4 years without any sea ice at all during May in the Bering Sea are unlikely in the foreseeable future.
5 AR 382 at 9; AR 11 at 53.

6 NMFS considered the data cited by Plaintiffs in the Figures in reaching its decision.
7 Plaintiffs have not pointed to any data or scientific evidence that NMFS failed to consider on this
8 issue; rather, Plaintiffs’ argument goes to the weight of the evidence, not whether NMFS failed to
9 consider evidence. Further, the agency did consider the critical months and concluded that: “our
10 analysis indicates that the late March to early May period in which the peak of ribbon seal
11 reproduction occurs will continue to have substantial ice for the foreseeable future.” AR 11 at 63.

12 Further, the Status Review states that the ribbon seal has “tended to retain the genetic
13 plasticity to adapt to both types of climatic extremes” (AR 11 at 95), which supports NMFS’s
14 conclusion that even if there is a decline in sea ice, ribbon seals will adapt and will not become
15 extinct for the foreseeable future. Plaintiffs counter that ribbon seals are less resilient to climate
16 change because they are habitat specialists in the Bering and Okhotsk Seas, which use specific ice
17 types, and they are found in localized concentrations. AR 186 at 3; AR 261 at 3. The papers on
18 which Plaintiffs rely are general background papers on ribbon seals and harbor seals, not specific
19 data showing whether ribbon seals are adaptable. AR 241 (stating that harbor seals can shift
20 pupping periods); AR 115 (ribbon seals are mobile and likely to move with the ice). The Status
21 Review also found that the ribbon seal was a dietary generalist that can adapt to different prey
22 species. AR 13 at 5.

23 Further, Plaintiffs argue that the failure to adequately address future sea ice declines caused
24 NMFS to: (1) fail to analyze ribbon seal pup mortality due to loss of sea ice during the nursing
25 period; (2) fail to analyze declining birth rates because females cannot find a suitable piece of ice for
26 birth; (3) fail to consider the survival of pups that require sea ice to haul out before they can swim;
27 (4) fail to consider the impact on adult molting. Pls.’ Mot. at 29-30. However, as described above,
28 Plaintiffs’ arguments go to NMFS’s interpretation of certain data, rather than to whether NMFS

1 failed to consider the best available scientific data. For example, NMFS addressed pup mortality in
2 the Status Review (AR 11 at 64), and how declining sea ice areas and thickness may impact
3 reproductive rates, including that “observed distributions of ribbon seals indicate that they have
4 adjusted their breeding locations to interannual variations in the position of sea ice.” AR 11 at 63.
5 NMFS noted that data may be missing regarding potential effects on breeding failure, but “the most
6 parsimonious approach is to assume that the population has been at equilibrium with respect to
7 conditions in the past, and that a change such as more frequent breeding farther from preferred
8 foraging habitats will have some impact on vital rates.” AR 11 at 64. In addition, NMFS addressed
9 adult survival where molting is interrupted. AR 11 at 64-65 (“the ultimate effect on adult survival
10 rate is currently difficult or impossible to model in a way that is not simply a reflection of assumed
11 input values.”).

12 Plaintiffs take issue with NMFS’s discussion in the Status Review of a study of thirty-one
13 ribbon seals from which NMFS draws the conclusion that no catastrophic losses occurred during the
14 warm years of 2001 through 2005. AR 11 at 64. The Status Review states:

15 Of 31 ribbon seals caught, 6 were subadults, 22 were adults, and 3 were young of the
16 year (which were commonly encountered but not always pursued for tagging). In
17 other words, the obvious presence of seals in the subadult age class did not indicate
that catastrophic losses had occurred in the ribbon seal cohorts produced during the
warm years of 2001-2005 (Figure 9).

18 AR 11 at 64. Although this is a small sample from which to draw conclusions, there are also
19 references in the Status Review to the paucity of data regarding ribbon seals. On balance, Plaintiffs
20 have failed to show that Defendants’ decision on this issue was arbitrary or capricious.

21 **C. Failure to consider past and projected changes for sea ice types and dynamics**

22 Plaintiffs also argue that NMFS failed to acknowledge the importance of understanding
23 changes in sea ice types and dynamics and failed to consider and apply the best available scientific
24 data in the field. Specifically, Plaintiffs argue that NMFS failed to consider the best available
25 evidence when it concluded in the Status Review that “the annual formation of winter ice in the
26 Bering Sea and Sea of Okhotsk will likely continue to produce ice of about the same mix of
27 thicknesses and types that have been typical in the recorded past.” AR 11 at 55 (“Still, under the
28 predicted long-term warming trend there may be some trend toward thinner ice floes, possibly

1 correlated with years of low ice extent.”). Plaintiffs argue that NMFS failed to consider a 2004
2 study by Clement that was submitted with the petition, and which reported that the thickness of
3 annual sea ice in the Bering Sea declines in warmer years and increases in colder years. AR 835.
4 Defendants respond that the Clement study is of little utility because it only addressed two years of
5 data. NMFS, however, addressed the effects of climate change on the annual formation of ribbon
6 seals’ sea ice habitat, including IPCC model projections AR 11 at 49, 53. On balance, Plaintiffs
7 have failed to show that Defendants’ decision on this issue was arbitrary or capricious.

8 **CONCLUSION**

9 Plaintiffs’ Motion for Summary Judgment is denied. Defendants’ Cross-Motion for
10 Summary Judgment is granted.

11 **IT IS SO ORDERED.**

12 Dated: December 21, 2010

Elizabeth D. Laporte

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ELIZABETH D. LAPORTE
14 United States Magistrate Judge
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