

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF FLORIDA**

**CASE NO. 2:19-CV-14243-ROSENBERG/MAYNARD**

CENTER FOR BIOLOGICAL DIVERSITY,

Plaintiff,

v.

U.S. FISH AND WILDLIFE SERVICE and  
DAVID BERNHARDT, in his official  
capacity as Secretary of the Department of the  
Interior,

Defendants.

**ORDER GRANTING PLAINTIFF’S MOTION FOR SUMMARY JUDGMENT**

This case is about whether the Secretary of the Interior’s decision not to list the Florida Keys mole skink as endangered or threatened under the Endangered Species Act was arbitrary and capricious. Before the Court are cross Motions for Summary Judgment filed by Plaintiff Center for Biological Diversity (“Center”) and Defendants United States Fish and Wildlife Service and David Bernhardt, in his official capacity as Secretary of the United States Department of the Interior (together, “FWS”). DE 50, 53. After careful consideration of the parties’ motions, the administrative record, and the parties’ oral argument, the Court is fully advised in the premises.

**I. INTRODUCTION**

The Florida Keys mole skink (“Skink”) is a small, brownish lizard with a brilliantly colored tail that can range from orange-red to pink. AR 110539.<sup>1</sup> The Skink has a unique genetic lineage and is found only on the islands of the Florida Keys. *Id.* It is semi-fossorial, meaning it is adapted

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<sup>1</sup> All citations to the administrative record omit the leading zero of the seven-digit record number.

to digging and living underground, and it lives in loose soils in the beach berm and coastal hammock of the Keys. AR 110538, 110557.

Historically, the Skink has been observed throughout the Keys, from Key Largo in the Upper Keys to the Dry Tortugas in the Lower Keys. AR 110547. However, survey efforts from 2014 to 2017 yielded only 127 Skink observations, 104 of which were from a single site: Long Beach on Big Pine Key. AR 111507. There are no recent reported observations in either end of its historic range on the Dry Tortugas or Key Largo. *Id.* However, because the Skink is cryptic, meaning its natural behavior makes it difficult to track, it is challenging to reliably estimate the Skink's population. AR 111509, 111514.

The Skink's "future condition is most influenced by the unmanaged and persistent upward trend in [sea level rise]." AR 110530. The National Oceanic and Atmospheric Administration (NOAA) estimates that global sea levels will rise 0.13 meters (5 inches) by 2040 and 0.3 meters (1 foot) by 2100 as a best-case scenario—one that has "a near one hundred percent probability of being exceeded." AR 110597. Losses to the landscape of the Florida Keys will occur exponentially across this range. *Id.*

The State of Florida originally listed the Skink as threatened under state law in 1974 but downgraded it to a species of concern in 1978. AR 110567. In 2010, the State relisted the species as threatened following a status review, citing the Skink's "very restricted area of occupancy (estimated at [7.8 square miles]) and the current threat of loss or degradation of habitat." *Id.*

In 2010, the Center petitioned FWS to list 404 species, including the Skink, as endangered or threatened under the Endangered Species Act. AR 110535. In September 2011, FWS issued a finding that the petition presented substantial scientific or commercial information indicating that listing the Skink may be warranted. *Id.* In September 2017, FWS determined that listing the Skink

as endangered or threatened was not warranted (“Listing Decision”). AR 111494–96; 82 Fed. Reg. 46,637–39. The Center then filed this lawsuit, claiming that the Listing Decision was arbitrary and capricious under the Administrative Procedure Act, 5 U.S.C. § 706(2)(A).<sup>2</sup>

## II. LEGAL STANDARD

### a. Administrative Procedure Act

The Administrative Procedure Act (APA) authorizes courts to “hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

The scope of review under the “arbitrary and capricious” standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made. In reviewing that explanation, we must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

*Motor Vehicle Mfrs. Ass’n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks and citations omitted).

“When an agency ‘is making predictions, within its area of special expertise, at the frontiers of science . . . as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.’” *Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1264 (11th Cir. 2009) (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 103 (1983)). However, the agency must “provide[] a reasonable explanation for adopting its approach and

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<sup>2</sup> The First Amended Complaint also included claims under the Freedom of Information Act which were dismissed with prejudice upon a joint motion of the parties. DE 40.

disclose[] the limitations of that approach.” *Alaska Oil & Gas Ass’n. v. Pritzker*, 840 F.3d 671, 679 (9th Cir. 2016).

In cases of this nature, the Court reviews the agency’s action solely in light of the administrative record. 5 U.S.C. § 706; *Camp v. Pitts*, 411 U.S. 138, 142 (1973) (“[T]he focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court.”). Accordingly, “there is no genuine dispute as to any material fact.” Fed. R. Civ. P. 56(a).

### **b. Endangered Species Act**

The Endangered Species Act requires the Secretary of the Interior to determine whether a species is endangered or threatened by considering five factors:

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

16 U.S.C. § 1533(a)(1). These factors must be evaluated “solely on the basis of the best scientific and commercial data available.” § 1533(b)(2). A species is endangered when it is “in danger of extinction throughout all or a significant portion of its range.” § 1532(6). A species is threatened when it “is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” § 1532(20).

### III. DISCUSSION

The Center argues that the Listing Decision was arbitrary and capricious in four ways: First, FWS failed to use the “best scientific and commercial data available” as required by the Endangered Species Act, 16 U.S.C. § 1533(b)(1)(A). Second, FWS failed to base its decision on individual and cumulative threats under the five statutory factors of Section 1533(a)(1). Third, FWS’s finding that the Skink is not endangered or threatened in a significant portion of its range is not supported by the record. Fourth, FWS applied the wrong legal standard in determining whether the Skink is threatened.

The Court begins by offering an overview of FWS’s scientific findings and its reasons for the Listing Decision. The parties’ substantive arguments will follow.

#### a. Overview

##### i. *Species Status Assessment*

To inform its Listing Decision, FWS assembled a team of scientists to prepare a Species Status Assessment (“SSA”). The SSA is a report that compiles scientific research and analyzes the biological status of a species. The SSA is intended to be “a living document that may be used to inform Endangered Species Act decision making, such as listing, recovery, Section 7, Section 10, and reclassification decisions.” AR 110535. The SSA states that it “is not a decisional document by the Service; rather it provides a review of available information strictly related to the biological status of the FL Keys mole skink.” *Id.*

The SSA described the current condition of the Skink in terms of the “three Rs”—resilience, redundancy, and representation. Resilience is “the ability to withstand stochastic disturbances and is associated with population abundance, growth rate, and habitat quality.” AR 110573. The SSA described its assessment of resilience as “incomplete” due to the lack of reliable

data on population size, but it noted that some level of breeding success was taking place and there was habitat distributed across the range of the Keys. AR 110573–74. Redundancy is a measure of “the number of resilient populations of a species.” AR 110575. The SSA found that the Skink “lacks a level of redundancy geographically because of its small endemic range,” and therefore “the entire subspecies is vulnerable to the timing and intensity of impacts.” AR 110576. Representation is “the ability of a species to adapt to changing environmental conditions and is measured by the breadth of genetic or environmental diversity within and among populations.” *Id.* The SSA concluded that the genetic diversity of the Skink was low, and there were no signs of interbreeding between it and other mole skink subspecies, putting the Skink at risk of impacts to the tropical system. AR 110577.

Turning to the future condition of the Skink, the SSA concluded that “climate change stressors are the most influential threat.” AR 110530. Three scenarios were developed to model the effects of climate change on the Skink—best case, moderate case, and worst case—which were based on different assumptions about the rate of greenhouse gas emissions. AR 110581. For each scenario, the SSA calculated the percentage of suitable habitat and suitable soils lost to inundation from sea level rise (“SLR”) using Geoplan, a project developed by the University of Florida in 2015. Geoplan uses GIS-based shape files to map out how much land will be inundated given certain amounts of SLR. AR 110581. Using Geoplan, the SSA projected that 2 to 10 percent of habitat and 19 to 32 percent of soils would be inundated from 2040 to 2100 under the best-case scenario. AR 110596. Under the moderate-case scenario, 5 to 36 percent of habitat and 27 to 46 percent of soils would inundate from 2040 to 2100. *Id.* Under the worst-case scenario, 17 to 74 percent of habitat and 37 to 71 percent of soils would inundate from 2040 to 2100. *Id.* The best-case scenario has a 100 percent likelihood of being exceeded by 2100, the moderate-case scenario

has a 50 percent likelihood of being exceeded by 2100, and the worst-case scenario has a 0.5 to 1 percent likelihood of being exceeded by 2100. AR 110608. The SSA further found that different islands of the Keys would inundate at different rates; 53 percent of all land on Big Pine Key would be inundated with two feet of sea level (equivalent to the 2060 worst-case scenario) while 36 percent of all land in the Keys would be inundated under the same conditions. AR 110604.

The SSA stresses that the Geoplan figures are “conservative estimate[s].” AR 110597. This is because NOAA published new projections in 2017 to account for accelerating SLR (“NOAA 2017”). The SSA notes: “[I]t is now recommended to add approximately 15% to the earlier global mean SLR projections . . . when using projections for southeast Florida (including the FL Keys) if the projections used do not yet model the accelerated rate.” AR 110558. In a separate document submitted as part of the administrative record, FWS described NOAA 2017 as based on “improved climate information.” AR 108562. Geoplan uses SLR projections developed by the U.S. Army Corps of Engineers in 2014 and does not account for the increased projections of NOAA 2017. AR 110581 (noting that Geoplan projections “do not yet account for the accelerated rates”); *id.* (“These projections do not yet reflect modeling based on new increased rate estimates.”). The SSA states that “GIS mapping shapefiles were available from the Geoplan data which allowed for viewing of inundation levels across the Keys in time lapse images,” a capability that NOAA 2017 apparently lacked. AR 110581–82.

The SSA concluded by stating that “under the future scenarios, reductions in population resiliency, subspecies redundancy, and subspecies representation are expected.” AR 110607.

*ii. Listing Decision*

FWS published its Listing Decision in the Federal Register on October 5, 2017. The Listing Decision incorporates by reference a Species Assessment Form, contemporaneously

published online, which contains a more detailed explanation of the basis for FWS’s decision. The Listing Decision essentially represents an abridged version of the analysis contained within the Species Assessment Form (“SA Form”); this Order will focus on FWS’s explanation for its decision as it appears in the SA Form.<sup>3</sup>

The first half of the SA Form recites the findings of the SSA and the second half represents FWS’s determinations under the Endangered Species Act. FWS concluded that the Skink was not endangered because “[t]he persistence of occupied habitat (as well as potentially occupied suitable habitat) across the subspecies’ range demonstrates resiliency, redundancy, and representation to sustain the subspecies beyond the near term.” AR 111522. FWS then concluded that the Skink was not threatened.

First, FWS concluded that the limit of the foreseeable future in this case was 2060. It declined to project inundation to 2100 “due to too much uncertainty in the projections that far out and the divergence among the Low, Medium, and High SLR projections beyond 2060.” AR 111523. “This includes the expectation that SLR will increase over time, but there is also uncertainty about how the skink will respond and how suitable habitats may transition.” AR 111522. Second, FWS cited the SSA’s Geoplan inundation projections for the year 2060:

[T]he amount of suitable habitat and soils loss is expected to be 4, 11, and 44 percent and 25, 33, and 50 percent under the Low, Medium, and High SLR projections, respectively. Although 44 percent of the suitable habitat and 50 percent of the suitable soils is estimated to be lost under the High SLR projection by 2060, which is within the 30–40 year foreseeable future, this High SLR projection has only a 0.5–1% probability of exceeded by 2100, and therefore is an exceptionally unlikely outcome.

AR 111523.

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<sup>3</sup> See *Alliance for the Wild Rockies v. Zinke*, 265 F. Supp. 3d 1161 (D. Mont. 2017) (holding that it was permissible for FWS to conduct its five-factor analysis in a Species Assessment Form rather than the published Listing Decision).



Third, FWS made the following determinations:

- The Skink’s continued occurrence on different Keys “indicates a level of resiliency to the stressors that have been acting upon it in the past,” such as strong rainstorms, tropical storms, and hurricanes, along with human development;
- The Skink’s persistence on different Keys provides “a level of redundancy, which may help the FL Keys mole skink withstand the potential increased catastrophic events into the future,” as well as adequate representation;
- Individual Skinks may be able to passively raft to other islands in the Keys in response to storm events in the future; and
- “Based on the continued existence of 56 to 98 percent of the suitable habitat and 50 to 81 percent of the soils under the 2040 and 2060 SLR projections, we expect the subspecies will continue to have adequate suitable habitat, soils, ground covers, and food sources to persist within the foreseeable future.”

*Id.* Finally, FWS concluded that the Skink was not endangered or threatened throughout a significant portion of its range, finding that there were “no portions of the FL Keys mole skink’s current range where potential threats are concentrated or substantially greater than in other portions of its range.” AR 111528. Therefore, FWS determined that listing the Skink as endangered or threatened was not warranted. *Id.*

#### **b. Best Available Science**

The Center argues that FWS violated the ESA’s command to rely on the best available science in two main ways. First, it contends that FWS erroneously relied on the Geoplan projections of habitat loss when FWS itself believed NOAA 2017 to be the more accurate model of SLR. Second, it believes FWS had no basis to limit the foreseeable future to the year 2060.

##### *i. Geoplan and NOAA 2017*

An agency may not “disregard[] available scientific evidence that is in some way better than the evidence [the agency] relies on.” *Am. Wildlands v. Kempthorne*, 530 F.3d 991, 998 (D.C. Cir. 2008) (quoting *Sw. Ctr. for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000)).

“The general view is that the agency decides which data and studies are the ‘best available’ because that decision is itself a scientific determination deserving deference.” *Miccosukee Tribe*, 566 F.3d at 1265. But this deference does not lessen the agency’s burden to “articulate a satisfactory explanation for its action.” *State Farm*, 463 U.S. at 43; *see also AOGA*, 840 F.3d at 679 (“We have stressed that we must defer to the agency’s interpretation of complex scientific data so long as the agency provides a reasonable explanation for adopting its approach and discloses the limitations of that approach.”) (internal quotation marks and citation omitted).

The Center contends that NOAA 2017’s SLR projections were the best available science by FWS’s own admission, and therefore it was error to rely on “outdated” Geoplan projections in determining that impending habitat loss did not threaten or endanger the Skink. DE 50 at 17. FWS responds that the SSA explains why FWS used Geoplan. The SSA states that “it is valuable to look at the effects of specific levels of inundation on the landscape rather than a specific year,” and Geoplan had this capability, although its underlying SLR data was not updated with NOAA 2017’s revised projections. DE 52 at 10 (quoting SSA).

Geoplan and NOAA 2017 are not directly comparable. Geoplan is a tool—a GIS-based mapping application that incorporates an underlying set of SLR projections. AR 111537. NOAA 2017 is a set of SLR projections. As such, the choice between the two is a choice between an older SLR model with a useful functionality and a newer SLR model with no such functionality. A fair reading of the SSA indicates that the staff who drafted it thought that GIS-based visualization was helpful for evaluating habitat loss. Geoplan was presumably used because it had this capability, despite its underlying SLR data not reflecting NOAA 2017’s accelerated projections. The drafters of the SSA seem to have found this significant, because the report repeatedly notes that the Geoplan inundation percentages were conservative estimates. AR 110597.

However, the SSA “is not a decisional document.” AR 110535. It contains the science that the agency considered, but it cannot explain why the decision maker relied on one study over another in making the Listing Decision. The SA Form acknowledged that Geoplan was based on older data, stating: “These projections do not yet reflect [NOAA] modeling based on new increased SLR rate estimates (which are approximately 15% higher).” AR 111516. And the SA Form cited NOAA 2017 in several other instances, including for the proposition that SLR was accelerating. AR 111518. As such, it can hardly be said that FWS entirely disregarded NOAA 2017, and it appears from the record that FWS considered NOAA 2017 to be the best available data for SLR in general. But FWS ultimately relied solely on Geoplan for the more specific purpose of estimating habitat loss to inundation, and the question is whether that choice was adequately explained. The Court concludes that it was not.

FWS’s finding was based, in relevant part, on the following propositions:

1. Using Geoplan, 4 to 44 percent of suitable habitat and 25 to 50 percent of suitable soils would be lost to inundation by 2060;
2. The high end of these projections—losses of 44 percent of habitat and 50 percent of soils—is an “exceptionally unlikely outcome”;
3. “Based on the continued presence of suitable habitat and soils to meet the subspecies’ needs for the foreseeable future,” the Skink is not threatened. AR 111523.

There is a missing explanatory link between FWS’s exclusive reliance on the Geoplan inundation percentages and its acknowledgement that NOAA 2017 predicted 15 percent faster SLR.

First, it could be that FWS chose not to credit NOAA 2017; FWS might have determined that NOAA 2017 was a high-end outlier among SLR models and therefore it was relying on the

SLR estimates underlying Geoplan. *See* AR 110597 (“The [Geoplan] SLR curves are in the mid-range of existing modeled SLR projections,” and NOAA 2017’s projections “downscaled regionally give High curves above those of the regional [Geoplan] curves.”). The Court expresses no view on the propriety of choosing not to credit NOAA 2017, but it does not appear likely that FWS did so in light of its numerous citations to NOAA 2017. Suffice it to say that if FWS intended to choose Geoplan on the basis that its underlying SLR projections were more accurate than NOAA 2017, it was required to say so and provide a rationale.

Second, it could be that although NOAA 2017 projected a 15 percent higher SLR rate, FWS determined that the Geoplan inundation projections would remain good ballpark estimates. If so, FWS should have explained its basis for that conclusion. In particular, the SSA found that “[h]abitat loss occurs exponentially across the Low, Medium, and High SLR scenarios.” AR 110608. It stands to reason that a 15 percent higher rate of SLR would produce correspondingly greater habitat inundation.

Third, it could be that FWS recognized that more habitat would be inundated under NOAA 2017, but the Skink would still not be threatened in the event of greater habitat loss than the Geoplan projections. If so, this too should have been made plain. The Court cannot infer that this was FWS’s reason, particularly due to the following passage from the SA Form:

Although 44 percent of the suitable habitat and 50 percent of the suitable soils is estimated to be lost under the High SLR projection by 2060, which is within the 30–40 year foreseeable future, this High SLR projection has only a 0.5–1% probability of exceeded by 2100, and therefore is an *exceptionally unlikely outcome*.

AR 111523 (emphasis added). The implication of this passage is that while the loss of 44 and 50 percent of habitat and soils is concerning, the remote possibility of the High SLR curve being met makes the risk a tolerable one. But NOAA 2017’s High curve is above Geoplan’s High curve—

this means that these percentages would be reached faster, and by extension, more habitat and soils would be inundated by 2060. AR 110597. It is unclear if this was taken into account.

A similar issue arose in *Center for Biological Diversity v. Zinke*, 900 F.3d 1053 (9th Cir. 2018). There, FWS found that the fluvial arctic grayling population was increasing despite a report showing that the number of effective breeders in a particular river was decreasing. *Ctr. for Biological Diversity*, 900 F.3d at 1068. The agency cited that report for another proposition but “did not mention that other aspects of the [report] contradicted the data on which FWS relied.” *Id.* The Court noted that “[a]lthough FWS is free to choose among experts, it must acknowledge that it is doing so,” and the listing decision “should have included adequate explanation and support for its determinations.” *Id.* at 1068–69 (internal quotation marks and citation omitted). Although here the agency did note NOAA 2017’s updated projections, it failed to draw the connection between them and the inundation models on which it relied.

In sum, the problem is internal consistency. If the agency credited NOAA’s finding that sea levels are rising 15 percent faster than previously thought, then FWS had to explain its use of inundation models that do not account for that accelerated rate. Because the Court cannot discern which of the above reasons, or some other reason, supported FWS’s reliance on the Geoplan habitat loss projections, and because those projections were central to the Listing Decision, the Listing Decision must be vacated and remanded. *State Farm*, 463 U.S. at 43 (“[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”) (citation omitted); *Ala. Envtl. Council v. EPA*, 711 F.3d 1277, 1288–89 (11th Cir. 2013) (“[C]ourts may not supply ‘a reasoned basis for the agency’s action that the agency itself has not given.’”) (citation omitted).

ii. *Rational Explanation*

The Center also argues that, even assuming the agency's reliance on the Geoplan projections was appropriate, FWS failed to explain how that amount of inundation did not threaten or endanger the Skink. Citing the Geoplan percentages, the Skink's continued presence on multiple Keys throughout most of its historical range, and the lack of evidence showing immediately declining Skink populations, FWS determined that the remaining habitat would be adequate to meet the Skink's needs for the foreseeable future. AR 111523.

An agency's determination of habitat adequacy is a technical judgment generally entitled to deference. *Miccosukee Tribe*, 566 F.3d at 1264. The case cited by the Center, *Greater Yellowstone Coalition, Inc. v. Servheen*, 665 F.3d 1015 (9th Cir. 2011), does not suggest otherwise. There, FWS determined that the Yellowstone grizzly bear population would have adequate habitat despite projected losses of whitebark pines, an important element of grizzly habitat, because there would still be pines within certain areas of a conservation zone. *Id.* at 1028. This was erroneous not because of a failure to explain why the remaining population of whitebark pine would be adequate, but because FWS had previously determined the entire conservation zone was "necessary" to support the grizzly population. *Id.* The case does not stand for the proposition that, when finding that projected habitat loss does not endanger or threaten a species, FWS is obligated to provide a hypothetical amount of habitat loss that *would* endanger or threaten the species.

Therefore, although the sufficiency of this explanation is ultimately intertwined with the agency's approach to SLR projections, the Court concludes that this is not an independent basis for remand.

iii. *Foreseeable Future*

The boundary of the foreseeable future for listing decisions under the Endangered Species Act is generally “based upon the best data available for a particular species and its habitat.” *AOGA*, 840 F.3d at 681; *see also In re Polar Bear ESA Listing & Section 4(d) Rule Litig.*, 709 F.3d 1, 15 (D.C. Cir. 2013) (“FWS determines what constitutes the ‘foreseeable’ future on a case-by-case basis in each listing decision.”).

The Center argues that it was error for FWS to limit the foreseeable future to 2060 on the basis of scientific uncertainty when the SSA projected SLR out to 2100. FWS responds that it was within its discretion to limit the foreseeable future to 2060 in light of the uncertainty of projections beyond that point.

*In re Polar Bear* is instructive. In that litigation, industry groups challenged FWS’s listing of the polar bear as threatened, partly on the basis that the use of a 45-year foreseeability period was unjustified. *In re Polar Bear*, 709 F.3d at 15–16. The D.C. Circuit determined that this was a reasonable period of foreseeability because the agency “found that there was general agreement in [climate] models about warming and sea ice trends until about mid-century, at which point they diverge on the basis of uncertainties . . . .” *Id.* The Court concluded: “That Appellants might have chosen a different period of foreseeability is of no moment so long as the agency’s decision was justifiable and clearly articulated.” *Id.* at 16. Therefore, divergence among models can properly be considered by an agency in determining the foreseeable future under the Endangered Species Act.

Here, FWS’s determination was explained and supported by the record. In addition to the uncertainty of how the Skink and its habitat will respond to the identified stressors, the agency cited divergence among Geoplan’s Low, Medium, and High SLR curves. AR 111522–23. The

2040 projections had a low of 0.13 and a high of 0.38 meters, a spread of 0.25 meters. AR 110627. The 2060 projections had a low of 0.18 and a high of 0.71 meters, a spread of 0.53 meters. *Id.* By 2100, the range was 0.28 to 1.6 meters, a spread of 1.32 meters. Determining how much divergence is too much to reliably make forecasts is a scientific decision entitled to deference. *Miccosukee Tribe*, 566 F.3d at 1264.

Nor does the fact that the SSA projected SLR to 2100 make FWS's decision to limit the foreseeable future to 2060 suspect. Because divergence among models can be considered in determining the foreseeable future, it necessarily follows that some models will make projections beyond the period the agency considers foreseeable—otherwise, there would be no divergence to observe. What's more, there is nothing necessarily untoward about agency scientists choosing to err on the side of giving decisionmakers more information rather than less.

Assuming for argument's sake that the agency appropriately relied on Geoplan, the Court concludes that limiting the foreseeable future to 2060 was not arbitrary and capricious in this case. On remand, FWS should consider whether its approach to Geoplan affects its conclusions regarding the foreseeable future, consistent with the discussion above.

#### *iv. Remaining Arguments*

The Center raises two additional arguments related to whether FWS used the best available science, neither of which merit relief. First, the Center argues that FWS disregarded other climate change effects threatening the Skink, such as storm surge and saltwater intrusion. These factors were adequately discussed in the SA Form, AR 111510–11, and the Listing Decision, AR 111495. Although FWS recognized that these climate effects were stressors, it concluded that the Skink had demonstrated resilience to these stressors in the past. AR 111523. Given the SSA's finding



that these climate-related effects were secondary to SLR, the Listing Decision was not arbitrary and capricious for failing to more heavily feature these impacts.

Second, the Center argues that the Skink qualifies as endangered or threatened under a standard that appeared in the Polar Bear Memo, a document produced by FWS in separate litigation. The parties did not identify why the Polar Bear Memo has any bearing on this litigation, and FWS did not cite the Polar Bear Memo for any proposition in making its Listing Decision. Because the Center's claims are not based on disagreement with FWS's legal interpretations of the Endangered Species Act, the circumstances do not call for the Court to construe the language of the Polar Bear Memo.

### **c. Five Listing Factors**

The Center argues that the Listing Decision is arbitrary and capricious for failing to account for the individual and cumulative effect of non-climate related stressors under the five listing factors of 16 U.S.C. § 1533(a)(1). FWS responds that these factors were considered.

The SSA analyzed a host of non-climate related stressors, including loss of habitat to development and conversion, displacement from human activities such as tourism and beach cleaning, change in habitat due to invasive species, predation, stochastic events such as hurricanes and oil spills, pesticides, disturbances from recreational vehicles and dumping, and collection. AR 110555. The SSA stated: "Stressors were considered cumulatively for their effects on the FL Keys mole skink and were currently found not to impose negative effects at the population or subspecies level." AR 110567. The SA Form expressly considered "the potential for cumulative impacts to the subspecies' needs." AR 111523. In light of the SSA's conclusion that these threats were not acute, the Listing Decision was not arbitrary and capricious for failing to discuss each of these stressors in detail. AR 111522.

Further, the SA Form explained its determination that human development would “not be a driving stressor” on the Skink’s future viability due to Monroe County’s Rate of Ordinance Growth, a regulation that curtails the extent of future development. AR 111523. It was not necessary to attempt to quantify the extent that future development might add to the habitat loss projections in light of the SSA’s overall conclusion that these threats were not significant cumulatively. Accordingly, the Listing Decision was not arbitrary and capricious for failure to consider the statutory listing factors.

**d. Significant Portion of Its Range**

The Center next challenges the agency’s finding that the Skink is not endangered or threatened in a significant portion of its range, arguing FWS erred in determining that the threats to the Skink were uniform. FWS responds that these findings were adequately explained and supported by the record.

The agency’s interpretation of the statutory phrase “significant portion of its range” is that a portion is significant if “without that portion, the representation, redundancy, or resiliency of the species would be so impaired that the species would be in danger of extinction or likely to become so in the foreseeable future.”<sup>4</sup> AR 111525. The SA Form states:

We found no portions of the FL Keys mole skink’s current range where potential threats are concentrated or substantially greater than in other portions of its range. Therefore, the risk of extinction is uniform across the range, so there is not likely to be a portion where the subspecies has a greater risk of extinction than its rangewide risk of extinction. AR 111528.

This explanation fails to account for a significant finding of the SSA. Whatever the propriety of relying exclusively on Geoplan’s SLR data, an undisputedly appropriate use of Geoplan was to model the *relative* rate at which different Keys would inundate. The SSA noted

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<sup>4</sup> Although the parties dispute whether this interpretation is correct, the Court need not reach that question.

that Big Pine Key “inundates earlier and to a greater extent than some of the smaller islands” in the Middle Keys. AR 110606. Under Geoplan, 53 percent of all land—not habitat—on Big Pine Key would be inundated under the 2060 High projection, and 69 percent of Boot Key would be inundated. AR 110634. In contrast, only 24 percent of Bahia Honda and 36 percent of Boca Chica would be inundated during the same period. *Id.* Importantly, 104 of 127 total Skink observations occurred on Big Pine Key, an island that inundates relatively quickly. AR 110549. Although observations are not necessarily proportional to population distribution, it is nonetheless significant that Big Pine Key accounted for 82 percent of all Skink observations. The nature of this finding warranted more explanation than the SA Form’s simple statement that there were no concentrated threats. On remand, FWS should explain why threats are uniform across the range notwithstanding non-uniform rates of inundation. Otherwise, the Court is unable to conclude whether the agency considered “an important aspect of the problem.” *State Farm*, 463 U.S. at 43.

#### **e. Threatened**

Finally, the Center argues that the Listing Decision improperly relied on the Skink’s continued “persistence” in determining that the Skink was not threatened. FWS responds that it cited the Skinks’ persistence only as evidence of the Skink’s future resilience, redundancy, and representation.

FWS applied the correct standard with respect to whether the Skink is threatened. AR 111523 (“[W]e conclude that the FL Keys mole skink is not in danger of extinction throughout all of its range nor is it likely to become so in the foreseeable future . . .”). When the agency discusses the Skink’s present persistence, it does so with reference to the future. *See id.* (noting persistence and concluding that “it is likely that development will not be a driving stressor on the future viability of the FL Keys mole skink”); *id.* (noting that persistence across multiple keys provides

“a level of redundancy, which may help the FL Keys mole skink withstand” future catastrophic events). Any imprecision in this language (e.g. finding that the Skink will have adequate resources “to persist within the foreseeable future”) is harmless in context of the discussion as a whole. Accordingly, the Listing Decision was not arbitrary and capricious on this basis.

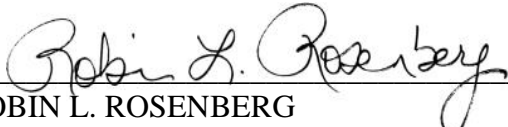
#### IV. CONCLUSION

FWS is charged with a mammoth task under the Endangered Species Act. It must make difficult judgment calls in the face of scientific uncertainty, often under time and resource constraints. The hard work of civil servants at FWS is commendable, and the Court’s conclusion that this Listing Decision was inadequately explained reflects only that “the Government should turn square corners” when the future of a species is on the line. *Dep’t of Homeland Sec. v. Regents of the Univ. of Cal.*, 140 S. Ct. 1891, 1909 (2020).

For the foregoing reasons, it is **ORDERED AND ADJUDGED:**

1. Plaintiff’s Motion for Summary Judgment [DE 50] is **GRANTED**. Defendants’ Motion for Summary Judgment [DE 53] is **DENIED**.
2. The Listing Decision is **VACATED** and this matter is **REMANDED** to the U.S. Fish and Wildlife Service and the Secretary of the Interior for further proceedings.
3. The Clerk of the Court is instructed to **CLOSE THIS CASE**.

**DONE AND ORDERED** in Chambers in West Palm Beach, Florida, this 15th day of September, 2020.

  
ROBIN L. ROSENBERG  
UNITED STATES DISTRICT JUDGE

Copies furnished to: All counsel of record via CM/ECF