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2/26/2016

Via Email

Dr. Perry Gayaldo
Deputy Director, Office of Protected Resources
NOAA Fisheries
1315 East-West Highway
Silver Spring, MD 20910

RE: Comments on Draft Protected Resources Strategic Plan for 2016-2010.

Dear Dr. Gayaldo:

Defenders of Wildlife submits the following comments on the draft NOAA Fisheries Protected Resources Strategic Plan for Fiscal Years 2016-2010. We commend the Office of Protected Resources for developing the plan and offering it for public comment. This forward-thinking approach is vital to improving how NOAA conserves endangered species at a time when the agency's workload continues to grow but its funding has not. We agree with the general contents of the draft plan and offer minor recommendations to enhance its effectiveness.

I. Allocating resources within the Species in the Spotlight initiative

We support the twin goals of your Species in the Spotlight initiative—conserving species at greatest risk of extinction and those closest to recovery. The draft plan, however, does not explain how NOAA intends to allocate resources between the two groups. We suggest a far heavier emphasis on preventing extinction because that objective will contribute more to biodiversity conservation in the long term. As William Beebe famously remarked, "when the last individual of a race of living beings breathes no more, another heaven and another earth must pass before such a one can be again." By contrast, delisting an improving species does not enhance biodiversity to the same extent because the species faces a lower risk of losing genetic diversity or populations. We view delisting as important mostly for sociopolitical and economic reasons, including enabling NOAA to divert its resources to more imperiled species. While those reasons are important, we do not believe they present the same urgency as preventing

extinctions. Our recommendations are consistent with how the U.S. Fish and Wildlife Service implemented its Showing Success, Preventing Extinction Initiative. Seventy-seven percent of the $11.3 million of total funding set aside for the initiative from 2004 to 2009 was allocated to Preventing Extinction projects.[1]

We also recommend NOAA use competitive grants to distribute funding for Spotlight initiative projects. Our understanding is that the Fish and Wildlife Service has successfully used this approach for its Preventing Extinction, Showing Success and its Cooperative Recovery initiatives.

II. Measuring success

Both objectives for the Spotlight initiative involve "mak[ing] measurable improvements" to species status, but the draft plan does not explain how this will occur. Nor are we aware of NOAA adopting a robust system to report on the status of all ESA-listed species the agency manages, which is critical to measuring success. The reporting system in the biennial recovery reports to congress is inadequate for several reasons. The most significant gap is that the 2012-2014 report appears to describe status only as demographic trends. If this is true, the report overlooks threat status, which is a critical component of conservation status. Measuring both demography and threats is vital to evaluating the effectiveness of many recovery actions and an essential component of a species' overall conservation status. We suggest NOAA consider adopting a more robust reporting method and offer for consideration and as an example the one we have developed. Our method reports on the status of demography and threats separately, and can easily be incorporated into five-year status reviews. The appendix contains a two-page explanation of our system and our analysis applying the system to all Florida animal species that FWS manages. If NOAA sees merit in the system, we would be pleased to provide more information about it.

III. Recovery planning

We applaud NOAA for recognizing the need to improve and standardize ESA implementation. We have many ideas for how to do so. One easy, innovative, and low-controversy technique is to make recovery plans "living documents"—easily updatable to incorporate new information on species biology and threat status (which would be informed by analyzing the cumulative impacts of section 7 projects on a species). We encourage you to consider developing and updating recovery plans using an online tool similar to Wikipedia. The plans can then be posted online in the wiki format, updated as new information becomes available, allow public and expert feedback, and printed as Adobe PDF documents as needed.

[1] Defenders of Wildlife, *Aiming to succeed: Targeting funds to enhance endangered species recovery*, available at http://www.defenders.org/publication/aiming-succeed-targeting-funds-enhance-endangered-species-recovery

We will be pilot testing this approach in the coming months and welcome collaborations if you are interested.

IV. Integrating ESA recovery and permitting

The draft plan underscores the importance of improving ESA implementation, but is silent on one of the best ways to achieve this: ensuring that recovery goals guide sections 7 and 10 decisions to the maximum extent allowed by law. There are many opportunities to better integrate recovery with permitting, two of which we summarize below.

a. The "destruction or adverse modification" prohibition

NOAA and FWS recently finalized their rule defining "destruction or adverse modification" of critical habitat. We were deeply disappointed with the agencies' decision not to expressly apply this restriction at a geographic scale more relevant to recovery planning, which is often smaller than the entire critical habitat designation. We had offered reasonable recommendations, including applying the restriction at the scale of "recovery units," "essential fish habitat," "subregions," and other delineations described in FWS or NOAA ESA documents. Despite the shortcomings of the final rule, we believe it leaves some flexibility for NOAA to apply it in ways that align better with recovery. For example, NOAA still has broad discretion to determine "if the overall value of the critical habitat is likely to be reduced."[2] We are also encouraged by NOAA's willingness to find "destruction or adverse modification" without a "jeopardy" finding in several of the recent consultations on pesticide registrations. In many instances, we believe that "destruction or adverse modification" should be easier to trigger than "jeopardy" for several reasons, including one that the National Research Council described in its study on science and the ESA:

> Designated habitat is protected by a more objective standard ("no adverse modification") than that provided for threats to species ("no likelihood of jeopardy") in that adverse habitat modifications are more amenable to objective measurement and quantification than are the many factors that might contribute to jeopardizing the survival of a species.[3]

If NOAA wants to maximize its ability to recover species, improving the consultation process would yield considerable gains.

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[2] U.S. Fish and Wildlife Service and National Marine Fisheries Service, *Final Rule, Interagency Cooperation—Endangered Species Act of 1973, as Amended; Definition of Destruction or Adverse Modification of Critical Habitat*, 81 Fed. Reg. 7214, 7222 (Feb. 11, 2016).

[3] National Research Council, SCIENCE AND THE ENDANGERED SPECIES ACT, National Academies Press (1995).

b. Evaluate the cumulative impacts of incidental take permitting, especially for programmatic consultations

NOAA should develop a system to better understand the cumulative effects of incidental take permitting on recovery progress. We recommend two areas to focus these efforts. First is to develop a system to track the total amount of incidental take authorized for every species and then use the results to inform future consultations, recovery plan updates, and five-year status reviews. Doing so will ensure that NOAA is fully aware of the extent to which incidental take permitting is affecting recovery.

Second is to more consistently evaluate the cumulative impacts of actions authorized through programmatic consultations. Many programmatic biological opinions lack a comprehensive cumulative impacts analysis, but one exception is the NOAA Biological Opinion on the U.S. Army Corps of Engineers Nationwide Permit Program to Discharge Dredge and Fill Materials.[4] There, NOAA explicitly applied the NEPA definition of "cumulative impacts," which is much broader than the Services' regulatory definition of "cumulative effects." Because cumulative *effects* are limited to future non-federal actions, they cannot capture the aggregate impacts of all site-specific actions under a programmatic action. Thus, a cumulative impact analysis complements the cumulative effects analysis required in every formal consultation. To operationalize this recommendation, NOAA should evaluate cumulative impacts as part of its analysis of the "effects of the action" in any programmatic consultation. These effects include "indirect effects," which are "those that are caused by the proposed action and are later in time, but still are reasonably certain to occur." Effects from future site-specific actions fall precisely into this category.

V. Information sharing and innovation

The introductory sections of the draft plan discuss the desire to "foster information sharing" and partner with non-governmental organizations to "identify…innovative approaches" to conservation. The details in Goal 4, however, seem to shy away from information sharing outside of government agencies. For example, NOAA "will support NOAA offices, federal agencies, and state partners with the information they need…" but there is no mention of data sharing with the public. We urge NOAA to explicitly commit to sharing with the public data that are not confidential or legally protected. Doing so would align with the White House's 2013 *Executive Order on Making Open and Machine Readable the New Default for Government Information*.[5] The Order requires that, going forward, newly generated government data must be made freely available in open, machine-readable formats, while safeguarding privacy,

[4] NAT'L MARINE FISHERIES SERV. BIOLOGICAL OPINION ON U.S. ARMY CORPS OF ENGINEERS' NATIONWIDE PERMIT PROGRAM (Feb. 17, 2012).

[5] https://www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government-

confidentiality, and security. The goal is to make troves of previously inaccessible or unmanageable data easily available to entrepreneurs, innovators, researchers, and others who can use those data to generate new products and services, build businesses, and create jobs. Data on endangered species and ESA implementation are highly amenable to this goal because much of it is inaccessible, unmanaged, and unanalyzed. A prime example is sections 7 and 10 monitoring reports, which are crucial to evaluating the effectiveness of minimization and mitigation measures.

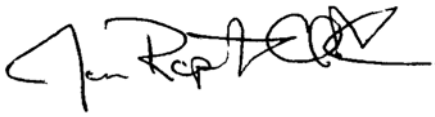
NOAA should embrace an open data policy not only because of legal requirements under the Executive Order, but also to improve ESA implementation. NGOs can be far more nimble than federal agencies at quickly analyzing large datasets. For example, we recent analyzed all of FWS's section 7 consultation results from 2008 through 2015[6]. FWS did not have the time or resources to analyze the dataset, but we did so in under six months and discovered many findings that were new to FWS. We are now doing the same with data on species occurrence, threats, funding patterns, and compliance with incidental take statements. Considering that NOAA's budget for endangered species is not increasing, the agency should take advantage of the public's ability and willingness to help with monitoring and data analysis. Indeed, the US EPA has done exactly that with its Next Generation Compliance initiative, which relies partly on public transparency to enable citizens to report potential violations of the Clean Air Act. Open data would also encourage some regulated entities to plan activities in ways that avoid and minimize effects on ESA species. An example of this comes from the pesticide industry's current efforts to obtain refined information on species occurrence, which would allow them to consider restricting pesticide use to areas with no species. Many more opportunities exist, but can only be capitalized on if data are widely available.

NOAA can encourage many other opportunities to take advantage of open data. Examples include releasing data that helps the public use remote-sensing technology to detect habitat disturbance, and developing a system for permittees to submit monitoring reports over the internet. Missing or incomplete reports would be automatically flagged for closer scrutiny. Defenders' Endangered Species Conservation Program will be pilot testing many of these ideas in the coming years and welcomes your interest in collaborating.

Thank you for the opportunity to comment on the draft strategic plan. If you have any questions about our comments, please contact Ya-Wei Li at yli@defenders.org or (202) 772-3219.

[6] Malcom, JW and Y-W Li. 2015. Data contradict common perceptions about a controversial provision of the US Endangered Species Act. *Proc. Nat. Acad. Sci.* 112(52):15844–15849.

Sincerely,



Jamie Rappaport Clark
President and CEO
Defenders of Wildlife

APPENDIX

A simple method to score and track the conservation status of ESA-listed species

Until 2010 the U.S. Fish and Wildlife Service (FWS) presented the status of each species listed under the U.S. Endangered Species Act (ESA) as improving, stable, declining, unknown, captive, or presumed extinct in its biennial report to Congress. FWS stopped providing this information after 2010 on the grounds that it was subjective and too costly to compile. Instead, the agency now reports only *status change recommendations.* Understanding the effectiveness of the ESA or the conservation status of individual listed species is exceedingly difficult based on these recommendations. Effectively and efficiently allocating limited resources is nearly impossible without a better understanding of the conservation status of the over 1,600 U.S. listed species.

There are two problems with the previous and current reporting standards. First, neither distinguishes between the status of *threats* a species faces and its *biological status*. Often, biological status improves only as threats are reduced; other times the two factors are not closely related. By separating these factors, FWS can make more informed conservation choices. For example, attempting to improve biological status by reintroductions may be inappropriate if threats are not addressed. Second, the current reporting standard, which provides only recommended status changes, can mask serious underlying conservation challenges. Consider the Florida Scrub-Jay (Figure 1), which has been declining ever since it was listed but whose most recent status change recommendation is "no change". There is no status change recommendation that reflects the species' continued decline because there is no "very endangered" status under the ESA. In other words, the current reporting masks the species' continued decline.

While these problems can be identified, coming up with a solution raises two new issues. First, any metric needs to apply to >1,600 listed species, ranging from lichen to large mammals. Second, defining and reporting a new metric must have minimal cost: the solution can't require a huge resource commitment from agencies that are already underfunded.

The ***key challenge*** for effectively monitoring the status of ESA-listed species is finding metrics that (a) accurately and efficiently capture biological and threat status, and (b) can be quickly scored.

Proposed solution

We propose the Services use the key below to translate information from their five year status reviews into two scores, one describing *changes* in the status of threats and one describing *changes* in the biological status of a species. These scores would range from -1 to +1 in increments of 0.5, and measure changes since the prior five year review:

Quick take

- Simple and effective metrics are needed to track the recovery of ESA-listed species
- A key challenge is identifying a standard metric that applies to all listed species
- We present a method that draws on detailed status reviews to score changes in the threats and biological status of any listed species
- We recommend that FWS and NMFS apply this method to all ESA-listed species

Status change recommendations come from species experts and indicate whether a species' ESA legal status—listed or not, threatened or endangered—should change.

Threats may include habitat modification or destruction, disease and predation, poaching, inadequate regulations, or other factors.

Biological status, also referred to as demography, can include population size, number of population, the extent of range, or population and genetic structure.

Figure 1. The endangered Florida Scrub-Jay. Photo GFDL by VvAndromedavV (https://goo.gl/P3845D).

Notice the scores are for **changes** of status. They should not be absolute metrics, which would probably be negative for all ESA-listed species.

Category	Criteria	Score					
		-1	-0.5	0	0.5	1	U
Threats	Most or all threats increased or impossible to address	X					
	Primary threats increased but others eliminated		X				
	Most or all threats continued unabated (no change)			X			
	Primary threats decreased but others increased				X		
	Most or all threats decreased or eliminated					X	
Biology	Most or all populations increased					X	
	Most populations increased but others decreased or eliminated				X		
	Most or all populations remained stable			X			
	Most populations decreased but others increased		X				
	All populations decreased	X					
Either	No information available						X

We scored *threat change as -1* and *biological status change as -1* for the Florida Scrub-Jay based on its (2007) five year review. These scores better reflect the species' conservation status than the current reporting that no status change is recommended. We found it possible to score dozens of species in a typical work day.

The ***proposed solution*** is clear and simple to use, and can be applied to any listed species. The two resulting scores quantitatively capture the two core components of conservation status.

Conclusion

We recommend that FWS and *NMFS* use the key to score the threats status and the biological status of all listed species as part of five year reviews. These scores should be included in the biennial recovery report to Congress to help track conservation status. While not proposing that the required five year reviews be done more often, we recommend that the Services update scores as needed. For example, white nose syndrome was identified as a serious threat to bats just after five year reviews were completed for several bats. Updated scores would help improve resource allocation decisions for just such cases. We anticipate that adopting the proposed scores will benefit the Services; will allow conservation partners and the public to understand how ESA-listed species are faring; and ultimately improve the chances of recovering the nation's most imperiled species.

The Scrub-Jay **score of -1 for threat change** comes from language in the 2007 status review such as, "Scrub-jays occupying habitat on private lands continue to be threatened with habitat degradation because most private landowners do not actively manage for scrub-jays... Disease or predation will likely have a greater effect on this species in the future. We expect scrub-jay populations will become increasingly vulnerable to extirpation due to disease because many populations are already small and further declines in population sizes can be expected..." (Emphasis added)

The **score of -1 for biological status change** comes from language in the 2007 status review such as, "Although a complete survey for this species has not been conducted since 1993, there have been numerous local surveys done. In addition, numerous section 7 consultations and section 10 permit applications confirm that habitat loss is continuing. These indicate a continuing decline is likely." (Emphasis added)

NMFS is the National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce.

More information

Please contact the **Endangered Species Conservation** department at Defenders of Wildlife:

esa@defenders.org

202-682-9400

Species	FWS 5-Year status recommendation	Demography Score	Threats Score
Alabama Cave Shrimp (14)	E	-0.5	-1
Arroyo Toad	E-->T	1	0
Bankclimber, purple(mussel) (elliptoideus sloatianus)	T	0	-1
bat, Florida bonneted (eumops floridanus)	E	-1	-1
Bat, gray entire(Myotis grisescens)	E	-1	-1
Bat, Indiana entire(Myotis sodalis)	E	-1	-1
Bay Checkerspot Butterfly (47)	T-->E	-1	0
Bean, Choctaw (Villosa choctawensis)	E	-1	-1
Black-Capped Vireo (31)	E-->T	1	0.5
Bluetail Mole Skink (22)	T	0	0
Borax Lake Chub (21)	E-->T	0.5	0
Butterfly, Bartram's hairstreak (Strymon acis bartrami)	E	-1	-1
Butterfly, Florida leafwing (Anaea troglodyta floridalis)	E	-1	-1
Butterfly, Miami Blue(Cyclargus (=Hemiargus) thomasi bethunebakeri)	E	-1	-1
Butterfly, Schaus swallowtail entire(Heraclides aristodemus ponceanus)	E	-0.5	0.5
CA Least Tern (106)	E-->T	1	1
Caracara, Audubon's crested FL pop. (Polyborus plancus audubonii)	T	-1	0
Chihuahua Chub (12)	T-->E	-1	0
Chittenango Ovate Snail (0)	T-->E	-1	-1
Columbian White-Tailed Deer (14)	E-->T	0	0.5
Copperbelly Water Snake (35)	T-->E	0	0
Crocodile, American FL pop. (Crocodylus acutus)	T	n/a	n/a
Darter, Okaloosa entire(etheostoma okaloosae)	T	1	1
Deer, key entire(Odocoileus virginianus clavium)	E	0	-0.5
Delmarva Fox Squirrel (34)	E-->R	1	1
Delta Green Ground Beetle (17)	T	0	0
Delta Smelt (74)	T-->E	-1	-0.5
Dwarf Wedgemussel (17)	E	-1	-1
Ebonyshell, round (Fusconaia rotulata)	E	-1	-1
Hawaiian Common Moorhen (49)	E	0	0
Hawaiian Crow (56)	E	-1	-1
Hawaiian Hawk (12)	E-->R	0.5	0
Inyo Towhee (47)	T-->R	1	1
Island Night Lizard (35)	T-->R	0	1
Kidneyshell, southern (Ptychobranchus jonesi)	E	-1	-1
Kirtland's Warbler (37)	E-->T	1	1
Kite, Everglade snail FL pop. (Rostrhamus sociabilis plumbeus)	E	-0.5	-0.5
Knot, red (Calidris canutus rufa)	T	-1	-1
Least Bell's Vireo (49)	E-->T	1	0.5
Least Tern (Interior) (82)	E-->R	1	0
Lesser Long-Nosed Bat (21)	E-->T	1	-1
Little Colorado Spinedace (52)	T-->E	-1	-1
Lost River Sucker (39)	E	-1	0.5
Magazine Mountain Shagreen (7)	T-->R	0	1
Manatee, West Indian entire (Trichechus manatus)	E-->T	1	-0.5
Moccasinshell, Gulf (Medionidus penicillatus)	E	-1	-1
Moccasinshell, Ochlockonee (Medionidus simpsonianus)	E	-1	-1
Modoc Sucker (36)	E-->T/R	1	1
Morro Shoulderband Snail (20)	E-->T	0.5	0.5
Mouse, Anastasia Island beach entire(Peromyscus polionotus phasma)	E	0	-0.5

Mouse, Choctawhatchee beach entire(Peromyscus polionotus allophrys)	E	-1	-1
Mouse, Key Largo cotton entire(Peromyscus gossypinus allapaticola)	E	-0.5	-0.5
Mouse, Perdido Key beach entire(Peromyscus polionotus trissyllepsis)	E	1	0
Mouse, southeastern beach U.S.A.(FL) (Peromyscus polionotus niveiventris)	T	0	0
Mouse, St. Andrew beach U.S.A.(FL) (Peromyscus polionotus peninsularis)	E	0.5	-1
Myrtle's Silverpot Butterfly (11)	E	0	0
Newell's Shearwater (39)	T-->E	-1	0
Nihoa (honeycreeper) Finch (24)	E	0	0
Northeastern Beach Tiger Beetle (19)	T-->E	-1	0
Ohlone Tiger Beetle(23)	E	-1	0
Oregon Silverspot Butterfly (68)	T-->E	-1	0
Painted Snake Coiled Forest Snail (14)	T	0	0
Panther, Florida (Puma (=Felis) concolor coryi)	E	-1	-1
Pigtoe, fuzzy (Pleurobema strodeanum)	T	-1	-1
Pigtoe, narrow (Fusconaia escambia)	T	-1	-1
Pigtoe, oval (Pleurobema pyriforme)	E	-1	-1
Pigtoe, tapered (Fusconaia burkei)	T	-1	-1
Plover, piping except Great Lakes watershed (Charadrius melodus)	E	0.5	0
Pocketbook, shinyrayed (Lampsilis subangulata)	E	-1	-1
Puritan Tiger Beetle (22)	T-->E	-1	-1
Purple Cat's Paw Pearlymussel (13)	E	-1	0
Rabbit, Lower Keys marsh FL (Sylvilagus palustris hefneri)	E	-1	-0.5
Ricerat lower FL Keys (Oryzomys palustris natator)	E	0.5	0
Salamander, frosted flatwoods Entire (Ambystoma cingulatum)	T	-1	-1
salamander, Reticulated flatwoods entire(Ambystoma bishopi)	E	-1	-1
Sandshell, Southern (Hamiota australis)	T	-1	-1
scrub-jay, Florida entire(Aphelocoma coerulescens)	T	-1	-1
Shrimp, Squirrel Chimney Caveentire(Palaemonetes cummingi)	T	n/a	-1
Skink, bluetail moleentire(eumeces egregius lividus)	T	n/a	-0.5
Skink, sand entire(Neoseps reynoldsi)	T	n/a	-0.5
Slabshell, Chipola (elliptio chipolaensis)	T	-1	-1
Smith's Blue Butterfly (72)	E-->T	-1	0
Snail, Stock Island treeentire(Orthalicus reses (not incl. nesodryas))	T	-0.5	0.5
Snake River Physa Snail (31)	E-->T	1	0.5
Snake, Atlantic salt marsh entire(Nerodia clarkii taeniata)	T	-1	-0.5
Snake, eastern indigo entire(Drymarchon corais couperi)	T	-1	-1
Southeastern Beach Mouse(10)	T	-0.5	0
Sparrow, CapeSableseasideentire(Ammodramus maritimus mirabilis)	E	-1	-1
Sparrow, Florida grasshopper entire(Ammodramus savannarum floridanus)	E	-1	-0.5
Stephen's Kangaroo Rat (25)	E-->T	-1	1
Stork, wood AL, FL, GA, MS, NC, SC (Mycteria americana)	E-->T	1	0.5
Sturgeon (Gulf subspecies), Atlantic entire(Acipenser oxyrinchus (=oxyrhynchus) desotoi)	T	0.5	0
Sturgeon, shortnoseentire(Acipenser brevirostrum)	E	n/a	n/a

Tern, roseateWestern Hemisphereexcept NeU.S. (Sterna dougallii dougallii)	T	-0.5	-0.5
Threeridge, fat (mussel) (C)	E	-1	-1
Tidewater Goby (34)	E-->T	0.5	1
Topeka Shiner (0)	E-->T	1	0.5
Uncompahgre Fritillary Butterfly (22)	E-->T	1	1
Valley elderberry Longhorn Beetle (32)	T-->R	0.5	1
Virgin Islands Tree Boa (28)	E-->T	1	1
Virginia Northern Flying Squirrel (0)	E-->R	0	1
Vole, Florida salt marsh entire(Microtus pennsylvanicus dukecampbelli)	E	n/a	-0.5
Waccamaw Silverslide (13)	T	0	-1
West Indian Manatee (122)	E-->T	0.5	0.5
Woodpecker, red-cockaded (Picoides borealis)	E	1	0.5
Woodrat, Key Largo (Neotoma floridana smalli)	E	-1	-1
Yellow-Shouldered Blackbird (21)	E	1	0.5