NATIONAL MARINE FISHERIES SERVICE POLICY DIRECTIVE 02-103 ***FEBRUARY 7, 1996***
Protected Resources Management
POLICY REGARDING THE RECOGNITION OF DISTINCT VERTEBRATE POPULATION SEGMENTS UNDER THE ESA
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Policy Regarding the Recognition of District Vertebrate Population; Notice

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act

AGENCIES: Fish and Wildlife Service, Interior; National Marine Fisheries Service, NOAA, Commerce.

ACTION: Notice of policy.

SUMMARY: The Fish and Wildlife Service and the National Marine Fisheries Service (Services) have adopted a policy to clarify their interpretation of the phrase ''distinct population segment of any species of vertebrate fish or wildlife'' for the purposes of listing, delisting, and reclassifying species under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et. seq.*) (Act).

ADDRESSES: The complete record pertaining to this action is available for inspection, by appointment, during normal business hours at the Division of Endangered Species, U.S. Fish and Wildlife Service, in Room 452, Arlington Square Building, 4401 North Fairfax Drive, Arlington, Virginia.

FOR FURTHER INFORMATION CONTACT: E. LaVerne Smith, Chief, Division of Endangered Species, U.S. Fish and Wildlife Service at the above address (703/358–2171), or Russell Bellmer, Chief, Endangered Species Division, National Marine Fisheries Service, 1335 East-West Highway, Silver Spring, Maryland 20910 (301/713–1401).

SUPPLEMENTARY INFORMATION:

Background

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et. seq.*). (Act) requires the Secretary of the Interior or the Secretary of Commerce (depending on jurisdiction) to determine whether species are endangered or threatened. In defining ''species,'' the Act as originally passed included, ''* * * any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature.'' In 1978, the Act was amended so that the definition read ''* * * any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' This change restricted application of this portion of the definition to vertebrates. The authority to list a ''species'' as endangered or threatened is thus not restricted to species as recognized in formal taxonomic terms, but extends to subspecies, and for vertebrate taxa, to distinct population segments (DPS's).

Because the Secretary must ''* * * determine whether any species is an endangered species or a threatened species'' (section 4(a)(1)), it is important that the term ''distinct population segment'' be interpreted in a clear and consistent fashion. Furthermore, Congress has instructed the Secretary to exercise this authority with regard to DPS's ''* * * sparingly and only when the biological evidence indicates that such action is warranted.'' (Senate Report 151, 96th Congress, 1st Session). The Services have used this authority relatively rarely; of over 300 native vertebrate species listed under the Act, only about 30 are given separate status as DPS's.

It is important in light of the Act's requirement to use the best available scientific information in determining the status of species that this interpretation follows sound biological principles. Any interpretation adopted should also be aimed at carrying out the purposes of the Act (i.e., ''* * * to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section'' (section 2(b)).

Available scientific information provides little specific enlightenment in interpreting the phrase ''distinct population segment.'' This term is not commonly used in scientific discourse, although ''population'' is an important term in a variety of contexts. For instance, a population may be circumscribed by a set of experimental conditions, or it may approximate an ideal natural group of organisms with approximately equal breeding opportunities among its members, or it may refer to a loosely bounded, regionally distributed collection of organisms. In all cases, the organisms in a population are members of a single species or lesser taxon.

The National Marine Fisheries Service (NMFS) has developed a Policy on the Definition of Species under the Endangered Species Act (56 FR 58612–58618; November 20, 1991). The policy applies only to species of salmonids native to the Pacific. Under this policy, a stock of Pacific salmon is considered a DPS if it represents an evolutionarily significant unit (ESU) of a biological species. A stock must satisfy two criteria to be considered an ESU:

(1) It must be substantially reproductively isolated from other conspecific population units; and

(2) It must represent an important component in the evolutionary legacy of the species.

This document adopts an interpretation of the term ''distinct population segment'' for the purposes of listing, delisting, and reclassifying vertebrates by the U.S. Fish and Wildlife Service (FWS) and NMFS. The Services believe that the NMFS policy, as described above, on Pacific salmon is consistent with the policy outlined in this notice. The NMFS policy is a detailed extension of this joint policy. Consequently, NMFS will continue to exercise its policy with respect to Pacific salmonids

The Services' draft policy on this subject was published on December 21, 1994 (59 FR 65885) and public comment was invited. After review of comments and further consideration, the Services adopt the policy as issued in draft form.

Summary of Comments and Recommendations

The Services received 31 letters from individuals and organizations commenting on the draft policy. In addition, since publication of the draft policy, the National Academy of Sciences, National Research Council (NRC), has published a report titled ''Science and the Endangered Species Act,'' prepared by a committee appointed by the Academy at the request of several members of Congress. This report in part examines the definition of ''species'' under the Act, and endorses the recognition of scientifically identified evolutionary units for conservation purposes. It discusses the recognition of DPS's in terms of ''distinctiveness,'' which is consistent with the concept of ''discreteness'' as presented in the draft policy except that it would not recognize an international political boundary to delimit a DPS. The committee noted that: ''Although there can be good policy reasons for such delineations, there are not sound scientific reasons to delineate species only in accordance with political boundaries.'' The Services agree that the inclusion of international boundaries in determining whether a population segment is discrete is sometimes undertaken as a matter of policy rather than science. Although the committee

expressed the belief that application of a distinctiveness test (analogous to the standard of discreteness in the policy) would adequately carry out the congressional instruction that the authority to address DPS's be exercised sparingly, the Services continue to believe that a judgement regarding the significance of any unit found to be discrete is necessary to comply with congressional intent.

Respondents presented a wide range of opinion regarding the recognition of DPS's. Some argued that the draft policy would be too restrictive and make it difficult or impossible to protect important elements of biodiversity; others maintained that the draft was not restrictive enough and would allow the Services to extend protection to entities never intended to be eligible for protection under the Act. A few respondents questioned the need for any policy framework and advocated case-by-case determinations of the eligibility of entities for listing under the DPS provision. The Services continue to believe that the Act will be best administered if there is a general policy framework governing the recognition of DPS's that can be disseminated and understood by the affected public.

Several respondents questioned the relationship of the draft policy to the NMFS policy regarding salmonids. The Services believe that the NMFS policy for salmonids is consistent with the general policy outlined in this notice, although the salmonid policy is formulated specifically to address the biology of this group. Several respondents also questioned the use of qualifying words such as ''significant'' or ''markedly'' in the policy. The Services intended these words to have their commonly understood senses. At the time any distinct population is recognized or not recognized the reasons for which it is believed to satisfy or not satisfy the conditions of the policy will be fully explained.

Several respondents maintained that a policy of this nature required adoption under rulemaking procedures of the Administrative Procedure Act. The Services disagree, and continue to regard the policy as non-regulatory in nature. Specific recommendations advanced by respondents are paraphrased and responded to below.

Only Full Species are Genetically Distinct From one Another, and Listing Should Only be Extended to These Genetically Distinct Entities.

Restricting listings to full taxonomic species would render the Act's definition of species, which explicitly includes subspecies and DPS's of vertebrates, superfluous. Clearly, the Act is intended to authorize listing of some entities that are not accorded the taxonomic rank of species, and the Services are obliged to interpret this authority in a clear and reasonable manner.

The Services Should Focus on Genetic Distinctness in Recognizing a Distinct Population Segment. Conversely, Some Respondents Believed There Should be No Requirement That a DPS be Genetically Differentiated or Recognizable for it to be Protected Under the Act

There appears to be a diversity of understanding regarding the purposes of the Act, with some individuals viewing it as directed almost exclusively toward the conservation of unique genetic resources while other individuals emphasize its stated intention of conserving ecosystems. This diversity of viewpoints is reflected in comments addressing the role to be played by genetic information in the draft policy. The Services understand the Act to support interrelated goals of conserving genetic resources and maintaining natural systems and biodiversity over a representative portion of their historic occurrence. The draft policy was intended to recognize both these intentions, but without focusing on either to the exclusion of the other. Thus, evidence of genetic distinctness or of the presence of genetically determined traits may be important in recognizing some DPS's, but the draft policy was not intended to always specifically require this kind of evidence in order for a DPS to be recognized. The ESU policy of NMFS also does not require genetic data before an ESU can be identified. Thus in determining whether the test for discreteness has been met under the policy, the Services allow but do not require genetic evidence to be used. At least one respondent evidently understood the draft policy to require that genetic distinctness be demonstrated before a DPS could be recognized, and criticized the draft on that basis. As explained above, this was never intended.

The Elements Describing Reasons for Considering a Population Segment Significant Should be Laid Out Comprehensively, Rather Than Presented as an Open-Ended Set of Examples as in the Draft Policy

The Services appreciate the need to make a policy on this subject as complete and comprehensive as possible, but continue to believe that it is not possible to describe in advance all the potential attributes that could be considered to support a conclusion that a particular population segment is ''significant'' in terms of the policy. When a distinct population is accepted or rejected for review pursuant to a petition or proposed for listing or delisting, the Services intend to explain in detail why it is considered to satisfy both the discreteness and significance tests of the policy.

In Assessing the Significance of a Potential Distinct Population Segment, the Services Should Focus on its Importance to the Status of the Species to Which it Belongs. Alternatively, the Services Should Emphasize the Importance of a Potential DPS to the Environment in Which it Occurs

Despite its orientation toward conservation of ecosystems, the Services do not believe the Act provides authority to recognize a potential DPS as significant on the basis of the importance of its role in the ecosystem in which it occurs. In addition, it may be assumed that most, if not all, populations play roles of some significance in the environments to which they are native, so that this importance might not afford a meaningful way to differentiate among populations. On the other hand, populations commonly differ in their importance to the overall welfare of the species they represent, and it is this importance that the policy attempts to reflect in the consideration of significance.

International Boundaries are not Appropriate in Determining That a Population is Discrete in the Draft Policy; Political Boundaries Other Than Those Between Nations may be Appropriate in Some Cases to Delimit DPS's

The Services recognize that the use of international boundaries as a measure of discreteness may introduce an artificial and non-biological element to the recognition of DPS's. Nevertheless, it appears to be reasonable for national legislation, which has its principal effects on a national scale, to recognize units delimited by international boundaries when these coincide with differences in the management, status, or exploitation of a species. Recognition of international boundaries in this way is also consistent with practice under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which is implemented in the United States by the Act. Recognition of other political boundaries, such as State lines within the United States, would appear to lead to the recognition of

entities that are primarily of conservation interest at the State and local level, and inappropriate as a focus for a national program. The Services recognize, as suggested in some comments, that infra-national political boundaries offer opportunities to provide incentives for the favorable management of species if they were used as a basis for recognizing discrete entities for delisting or for exclusion from a listing. Particularly when applied to the delisting or reclassification of a relatively widespread species for which a recovery program is being successfully carried out in some States, recognition of State boundaries would offer attractive possibilities. Nevertheless, the Act provides no basis for applying different standards for delisting than those adopted for listing. If the Services do not consider entities for listing that are not primarily of conservation interest at a national level, they must also refrain from delisting or reclassifying units at this level.

Complete Reproductive Isolation Should be Required as a Prerequisite to the Recognition of a Distinct Population Segment

The Services do not consider it appropriate to require absolute reproductive isolation as a prerequisite to recognizing a distinct population segment. This would be an impracticably stringent standard, and one that would not be satisfied even by some recognized species that are known to sustain a low frequency of interbreeding with related species.

The Services Should Emphasize Congress' Instruction to use Their Authority to Dddress DPS's ''Sparingly''

The Services believe that application of the policy framework announced in this document will lead to consistent and sparing exercise of the authority to address DPS's, in accord with congressional instruction.

The Occurrence of a Population Segment in an Unusual Setting Should not be Used as Evidence for its Significance

The Services continue to believe that occurrence in an unusual ecological setting is potentially an indication that a population segment represents a significant resource of the kind sought to be conserved by the Act. In any actual case of a DPS recognized in part on this basis, the Services will describe in detail the nature of this significance when accepting a petition or proposing a rule.

The Authority to Address DPS's Should be Extended to Plant and Invertebrate Species

The Services recognize the inconsistency of allowing only vertebrate species to be addressed at the level of DPS's, and the findings of the NRC committee also noted that such recognition would be appropriate for other species. Nevertheless, the Act is perfectly clear and unambiguous in limiting this authority. This policy acknowledges the specific limitations imposed by the Act on the definition of ''species.''

The Services Should Stress Uniqueness and Irreplaceability of Ecological Functions in Recognizing DPS's

The Services consider the Act to be directed at maintenance of species and populations as elements of natural diversity. Consequently, the principal significance to be considered in a potential DPS will be the significance to the taxon to which it belongs. The respondent appears to be recommending that the Services consider the significance of a potential DPS to the community or ecosystem in which it occurs and the likelihood of another species filling its niche if it should be extirpated from a particular portion of its range. These are important considerations in general for the maintenance of healthy ecosystems, and they often coincide with conservation programs supported by the Act. Nevertheless, the Act is not intended to establish a comprehensive biodiversity conservation program, and it would be improper for the Services to recognize a potential DPS as significant and afford it the Act's substantive protections solely or primarily on these grounds.

Congress did not Intend to Require That DPS's be Discrete. In a Similar Vein, Congress did not Require That a Potential DPS be Significant to be Considered Under the Act

With regard to the discreteness standard, the Services believe that logic demands a distinct population recognized under the Act be circumscribed in some way that distinguishes it from other representatives of its species. The standard established for discreteness is simply an attempt to allow an entity given DPS status under the Act to be adequately defined and described. If some level of discreteness were not required, it is difficult to imagine how the Act could be effectively administered or enforced. At the same time, the standard adopted does not require absolute separation of a DPS from other members of its species, because this can rarely be demonstrated in nature for any population of organisms. The standard adopted is believed to allow entities recognized under the Act to be identified without requiring an unreasonably rigid test for distinctness. The requirement that a DPS be significant is intended to carry out the expressed congressional intent that this authority be exercised sparingly as well as to concentrate conservation efforts undertaken under the Act on avoiding important losses of genetic diversity.

A Population Should Only be Required to be Discrete or Significant, but not Both, to be Recognized as a Distinct Population Segment

The measures of discreteness and significance serve decidedly different purposes in the policy, as explained above. The Services believe that both are necessary for a policy that is workable and that carries out congressional intent. The interests of conserving genetic diversity would not be well served by efforts directed at either well-defined but insignificant units or entities believed to be significant but around which boundaries cannot be recognized.

Requiring That a DPS be Discrete Effectively Prevents the Loss of Such a Segment From Resulting in a Gap in the Distribution of a Species. Essentially, if Distinct Populations are Entirely Separate, the Loss of One Has Little Significance to the Others

If the standard for discreteness were very rigid or absolute, this could very well be true. However, the standard adopted allows for some limited interchange among population segments considered to be discrete, so that loss of an interstitial population could well have consequences for gene flow and demographic stability of a species as a whole. On the other hand, not only population segments whose loss would produce a gap in the range of a species can be recognized as significant, so that a nearly or completely isolated population segment could well be judged significant on other grounds and recognized as a distinct population segment.

The Services Lack Authority to Address DPS's of Subspecies

The Services maintain that the authority to address DPS's extends to species in which subspecies are recognized, since anything included in the taxon of lower rank is also included in the higher ranking taxon.

The following principles will guide the Services' listing, delisting and reclassification of DPS's of vertebrate species. Any proposed or final rule affecting status determination for a DPS would clearly analyze the action in light of these guiding principles.

Policy

Three elements are considered in a decision regarding the status of a possible DPS as endangered or threatened under the Act. These are applied similarly for addition to the lists of endangered and threatened wildlife and plants, reclassification, and removal from the lists:

1. Discreteness of the population segment in relation to the remainder of the species to which it belongs;
2. The significance of the population segment to the species to which it belongs; and
3. The population segment's conservation status in relation to the Act's standards for listing (i.e., is the population segment, when treated as if it were a species, endangered or threatened?).

Discreteness: A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions:

1. It is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.
2. It is delimited by international governmental boundaries within which differences 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.

Significance: If a population segment is considered discrete under one or more of the above conditions, its biological and ecological significance will then be considered in light of Congressional guidance (see Senate Report 151, 96th Congress, 1st Session) that the authority to list DPS's be used ''* * * sparingly'' while encouraging the conservation of genetic diversity. In carrying out this examination, the Services will consider available scientific evidence of the discrete population segment's importance to the taxon to which it belongs. This consideration may include, but is not limited to, the following:

1. Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon,
2. Evidence that loss of the discrete population segment would result in a significant 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.

Because precise circumstances are likely to vary considerably from case to case, it is not possible to describe prospectively all the classes of information that might bear on the biological and ecological importance of a discrete population segment.

Status: If a population segment is discrete and significant (i.e., it is a distinct population segment) its evaluation for endangered or threatened status will be based on the Act's definitions of those terms and a review of the factors enumerated in section 4(a). It may be appropriate to assign different classifications to different DPS's of the same vertebrate taxon.

Relationship to Other Activities

The Fish and Wildlife Service's Listing and Recovery Priority Guidelines (48 FR 43098; September 21, 1983) generally afford DPS's the same consideration as subspecies, but when a subspecies and a DPS have the same numerical priority, the subspecies receives higher priority for listing. The Services will continue to generally accord subspecies higher priority than DPS's.

Any DPS of a vertebrate taxon that was listed prior to implementation of this policy will be reevaluated on a case-by-case basis as recommendations are made to change the listing status for that distinct population segment. The appropriate application of the policy will also be considered in the 5-year reviews of the status of listed species required by section 4(c)(2) of the Act.

Effects of Policy

This guides the evaluation of distinct vertebrate population segments for the purposes of listing, delisting, and reclassifying under the Act. The only direct effect of the policy is to accept or reject population segments for these purposes. More uniform treatment of DPS's will allow the Services, various other government agencies, private individuals and organizations, and other interested or concerned parties to better judge and concentrate their efforts toward the conservation of biological resources at risk of extinction.

Listing, delisting, or reclassifying distinct vertebrate population segments may allow the Services to protect and conserve species and the ecosystems upon which they depend before large-scale decline occurs that would necessitate listing a species or subspecies throughout its entire range. This may allow protection and recovery of declining organisms in a more timely and less costly manner, and on a smaller scale than the more costly and extensive efforts that might be needed to recover an entire species or subspecies. The Services' ability to address local issues (without the need to list, recover, and consult rangewide) will result in a more effective program.

Author/Editor: The editors of this policy are Dr. John J. Fay of the Fish and Wildlife Service's Division of Endangered Species, 452 ARLSQ, Washington, DC 20240 (703/358–2105) and Marta Nammack of the National Marine Fisheries Service's Endangered Species Division, 1335 East-West Highway, Silver Spring, Maryland 20910 (301/713–2322).

Authority: The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: February 1, 1996.

John G. Rogers,

Acting Director, Fish and Wildlife Service.

Dated: February 1, 1996.

Nancy Foster,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

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