



ASSOCIATION *of*
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AGENCIES

Association of Fish and Wildlife Agencies
Threatened and Endangered Species Policy Committee
Chairman Paul J. Conry, HI; Vice Chair Terry B. Johnson, AZ

Wednesday, March 18, 2009
1:30 pm - 5:00 pm
Crystal Gateway Marriott, Arlington IV
Arlington, Virginia

Agenda

- 1:30 Introductions (All)
- 1:40 Review of Agenda (All)
- 1:45 FWS ESA Policy Update (Bryan Arroyo - FWS)
- Status of new Section 7 Regulations
 - Status of Endangered Species Program Strategic Plan
 - Implementation of Recreational Hunting and Wildlife Conservation Plan (Pres. Exec. Order #13443)
- 2:15 NOAA ESA Policy Update (Jim Lecky, NOAA Fisheries)
- 2:30 DOD ESA Update (Peter Boice, DOD)
- 2:45 USDA-NRCS Update on MOU between AFWA and Federal agencies to develop Programmatic Agreements (Howard Hankin, NRCS)
- 3:00 Break
- 3:15 ESA and Climate Change Working Group Report – Draft Revised Issue Paper on ESA and Climate Change (Paul Conry, HI)
- Action Item: TESP Committee Adoption of Working Group Revised Report
 - Action Item: Recommendations on next steps for implementation of Issue Paper

- 4:00 American Recovery and Reinvestment Act –Federal and State plans for implementation of the 2009 federal economic stimulus package – conservation opportunities. (FWS, NOAA, State Agencies)
- 4:30 Development of a 2009 NCN – National Conservation Need proposal for TESP Committee
- 4:45 Other Business
- 5:00 Adjourn

**Association of Fish and Wildlife Agencies
Threatened and Endangered Species Policy Committee**

**Subcommittee on Endangered Species Law and Management
of Species Deleteriously Affected by Climate Change.**

Working Directive:

That the Association establish a subcommittee to analyze, deliberate and recommend any necessary changes to the Endangered Species law and/or implementing policy to accommodate management of species affected deleteriously by climate change.*

Introduction – Impacts of Climate Change to Ecosystems and Endangered Species

Global climate change is expected to have significant effects on natural resources during the next 50-100 years. Expected changes include warming temperatures, sea level rise, and increased frequency of extreme precipitation events. According to the most recent Intergovernmental Panel on Climate Change Reports, (IPCC, 2007), in northern areas, climate change will result in generally milder winters, longer and warmer growing seasons, glacial melting, increased evapotranspiration as well as extreme snowfall and rain events leading to increased flooding. In southern areas, predictions include hotter and longer summers, drought conditions and increased wildfires. Along coasts and on islands, inundation of lands is expected. Biological effects will include increases in insect and disease infestations, habitat fragmentation and loss, pollution and sedimentation, shifts in species distribution, spread of invasive species, changes in timing of natural events, and loss of some species that cannot adapt quickly enough. According to the IPCC report, climate change could increase the risk of extinction for approximately a quarter of the world's biodiversity. Species most likely to be affected are species already at risk from other threats and those species in regions that will experience the greatest amount of climate change. Given these changes, it may not be possible to assure for maintenance of all components of existing ecosystems, but a focus on maintaining healthy ecosystems will assure support for the greatest number.

Species will react differently to these ecosystem and habitat changes that are the result of climate change. Some will benefit and increase their ranges and abundances while others will be negatively affected and exhibit contracted ranges and reduced abundances. Rare, declining and endangered and threatened species will likely be the first to feel the effects, due to their often limited range and low population numbers. It is conservation of this naturally occurring endemic and indigenous biodiversity that is the concern.

*This issue paper is a product of the Association of Fish and Wildlife Agencies and the conclusions and recommendations presented do not necessarily reflect the positions of the non-state individuals and organizations that participated in the discussions or provided technical information.

The challenge for resource management agencies will be to manage for healthy, productive ecosystems in an uncertain future and to change their institutional, legal and policy frameworks to respond quickly enough to sustain the natural resources they manage for the “public trust”. State fish and wildlife agencies have an extensive history of managing natural resources for the public trust and are well positioned to address these issues.

This will require cooperative efforts to establish priorities for maintaining endemic and indigenous biodiversity and ecosystem function and services under rapidly changing environmental conditions. It may not be feasible to prevent all extinctions or fully recover species such that they can be self-sustaining without continuous management. It will require pragmatic prioritization to identify those species that may become extinct (or extirpated) in the new conditions and those that may be able to either adapt to new conditions or may be able to redistribute as conditions change. There is an urgent need for a more comprehensive approach to climate change that extends beyond the ability of the current Endangered Species Act (ESA) and regulations to address. There is a need for flexibility in implementation of the ESA itself to be most effective in preserving species and the ecosystems on which they depend. Collaborative approaches among state and federal agencies, academic institutions, and NGO’s will be necessary to maximize resources available to address future common challenges and a commitment to explore and advocate for sound national policies and funding to address these issues at the national, regional, and state levels.

A key to success in addressing the challenges to preserving species affected by climate change will be the ability to communicate with stakeholders and the general public and to provide information on issues and rationale for management approaches and actions at the local, state, regional, and national level. Another key to success will be the ability of state and federal agencies, researchers, policy makers, planners, and natural resource managers to communicate and work together to enhance collaborative efforts.

Interests seeking to reduce anthropogenic increases in atmospheric greenhouse gases (GHG) as the continuing cause of climate change, are attempting to use the ESA as a means to affect change in national policy on regulating emission of GHG. Petitions to list hundreds of species have been filed, based on projected impacts of climate change, with the expectation that the regulatory authority of the ESA can, and will, be used to reduce GHG emissions and affect the rate of climate change. However, the ESA is inadequate to achieve the changes necessary to reduce global GHG emissions necessary to reduce or reverse the rate of climate change. The regulatory scope of the ESA is limited to the United States. Reduction of global GHG emissions requires a global response and/or regulatory mechanism.

Beyond the issue of efficacy of the ESA as a tool to address climate change policy, responding to listing petitions for species potentially affected by climate change will divert limited resources from other ESA responsibilities, such as recovery. Current ESA regulatory resources are already overburdened and these additional petitions and other actions required responding to these petitions will simply overwhelm the capacity of

agencies to address endangered species issues effectively. Diversion of these resources may reduce the benefits of the ESA for species facing threats that can be effectively ameliorated through ESA regulatory action.

The purpose of this issue paper is to identify both the opportunities and limitations for application of the ESA to the challenges resource managers face in dealing with the impacts of climate change. The following sections address the need for a mechanism to decide when the ESA can, and should, be applied; describe the potential role of State Wildlife Action Plans as a supplement to the ESA in dealing with climate change; and identify specific changes needed in listing actions, definition of “foreseeable future”, treatment of critical habitat, and recovery standards and recommend a way to address the issue, either through a change in the ESA legislation, regulations, or implementing policies. Given that climate change is increasingly being used as a basis for ESA decisions, it is imperative that the issues identified are discussed and deliberated in an urgent manner. This will help assure that decisions are based on consistent manner and are focused on providing maximum benefit.

Proposed Needed Changes:

1. How to Address a Dynamic Evolving System with a Law and Implementing Regulations Based on Individual Species Actions.
 - a. A broad recommendation of the Subcommittee is for a renewed emphasis on the core intent of ESA as stated in Section 2.(b) of the Act: “Purposes. – The purposes of the Act are to provide a means whereby the **ecosystems** upon which endangered species and threatened species depend may be conserved....”. However, we are witnessing climate change altered ecosystem processes and functions as well as shifts in the geographic extent of ecosystems. As such, it may not be possible to assure for the status quo of all ecosystems, but a focus on maintaining healthy ecosystems will assure support for the greatest number of component parts. Research and monitoring will be necessary to improve our understanding of how ecosystem-wide changes due to climate change affect biological communities, species and populations and to mitigate those affects. Effective management will require actions on an ecosystem or larger scale to address these systemic changes in conditions. Proactive, coordinated and broad-based efforts to undertake conservation actions, such as the establishment of corridors for movement of species to more suitable habitats, and efforts to develop and implement viable methods for movement of sessile species to new habitats, is the most promising approach to meeting the purpose and goals of the ESA.
 - b. Suggested Changes:
 1. Provide the agencies the flexibility to identify and prioritize actions based on umbrella species or those species whose requirements include those of many other species, that would

extend benefits to multiple species, and take landscape scale approaches that benefit habitat for multiple species, rather than a sequential individual species approach. Conservation actions for umbrella species should automatically conserve a host of other species without needing to take further regulatory actions. Achieving this agency flexibility could be done through revision of recovery plans and clearer direction in agency policy.

2. Incorporate State Wildlife Action Plans and Other Landscape Level Plans and Strategies into the Process.
 - a. The restorative management and mitigative measures of the States and other agencies and partners developed in State Wildlife Action Plans and other landscape level plans and strategies offer an effective means to address the deleterious affects of climate change on species prior to the point they need ESA protections. The effectiveness of State Wildlife Action Plans in providing adequate regulatory protections and/or incentive-based programs with a net conservation benefit to species, should be considered in the listing process. The use of State expertise, data, personnel and working relationships with private landowners contained in the State plans and strategies has the potential to achieve greater conservation benefits faster and cheaper than duplicating efforts and processes in the traditional ESA listing approach.
 - b. Suggested changes:
 1. Provide flexibility to use the plans and management actions in State Wildlife Action Plans and other Landscape Level Plans and Strategies to protect and manage species affected by predicted, future climate impacts, in lieu of listing the species. Achieving this agency flexibility could be done through revision of the PEACE policy and the listing priority guidance. Greater use of State Wildlife Action Plans and management actions could be achieved by clearer direction in Service policy and by incorporating State plans into recovery plans.
 2. States need to update their State Wildlife Action Plans and other landscape level plans and strategies to incorporate the monitoring and management actions for species at risk from climate change. This change in broadening the focus of the State Wildlife Action Plans would require a change in implementing policy to require the update, and action by the individual States when they update their Plans.
 3. Adequately fund State Wildlife Action Plans and other conservation plans and strategies that mitigate the affects of climate change on wildlife. This change would require statutory action by Congress to provide additional funding for State Wildlife Actions Plans or other conservation plans and strategies.

3. Listing Actions:

- a. Climate change is predicted to cause changes in many ecosystems and the habitats and species they support. This will make it difficult to manage existing ecosystems and the species diversity they support. As ecosystems change, some species will benefit while others will be deleteriously affected. It may not be possible to save all species.

These changes, while predictable, may take years to develop and the severity and magnitude of the predicted impacts may change dependent on many factors, such as a species ability to adapt to changing habitats and situations, and human efforts to slow or reverse climate change or modify human behaviors to mitigate impacts. While climate change related declines may be predictable, the precise magnitude and time of significant change are still uncertain and difficult to manage.

Hundreds of listing actions have been proposed based on climate change related impacts and resultant population declines projected to occur over the next 50-100 years. The ESA needs the flexibility to focus on those species that are at highest and most urgent risk. Additionally, many climate-change listing actions are based on causal chains that link climate change to possible habitat change and subsequent reduced population viability. It is critical to understand the limitations and variability in outcomes in models associated with such causal chains, especially for listing actions for currently healthy populations. An example is the polar bear which was recently listed as threatened due to projected loss of sea ice due to climate change.

These petitions require administrative action and use scarce resources that may be better spent on management and recovery or more critical listing issues. Also, many mitigation actions may occur over the period climate is expected to change.

b. Suggested changes:

1. Climate change related listing actions should be directed toward those species with the greatest degree of near term threat and triggered only if there is direct evidence that the species is declining and there is reason to believe the species can benefit from the listing action. Limiting listing actions to this prioritized approach could be achieved in part by a change in the listing priority guidance, but would require legislative change to be fully implemented.
2. Consideration should be given for not listing species that will be able to migrate to other suitable habitats if their existing habitat becomes unsuitable from climate change effects. Providing flexibility not to list under these circumstances would require policy clarification and may require legislative change.
3. The uncertainty associated with the use of model projections of impacts to species based on climate change should be identified

and considered before the modeling results are used to list based on projected impacts from climate change. Clarifying the parameters of models and the acceptable amount of risk in modeling future impacts from climate change would require a change in implementing policy.

4. Provide regulatory flexibility to manage the listing process to allow triage and to select priority species to list. Listings should be prioritized for those species where there is an ability to effect meaningful change through management actions or regulatory actions to prevent harmful direct impacts. Providing flexibility to prioritize listing in this manner would be facilitated by a change in the listing priority guidance, but may also require changes in regulations.
5. The ESA should not be the means to try and force environmental policy change by seeking ESA regulatory control to stop greenhouse gas emissions. The ESA is not the correct tool to manage greenhouse gas emissions. Clarifying the parameters of how broadly the ESA should be used to deal with climate change would require establishment of a new policy statement on this issue.

4. Defining “Foreseeable Future”:

- a. Foreseeable future is a concept used to assess threats to a species and its continued viability. As such, it is species and threat specific. Long-lived species will generally require a definition of foreseeable future of greater length, short lived species for a shorter length. Existing recovery plans generally reflect this concept. The nature of a specific threat and the anticipated time to reduce that threat so that the continued viability of the species is assured must also be considered in listing and subsequent ESA related actions. Unfortunately, when crafting the ESA Congress did not define the “future” into which an agency must peer as biologically or scientifically based. Instead, it used “foreseeable” to define the certainty with which an agency can see or predict the future. The ordinary meaning of the phrase “foreseeable future” establishes that it should be short enough that the agency can determine the future with a relatively high degree of certainty. Thus, the foreseeable future into which the agency must assess potential threats to a species is that time period within which the agency can actually predict the future state of things with a high degree of certainty or probability. The more complex and uncertain the set of factors affecting the species, the shorter the future time period should be. Climate change and species specific response to climate change will likely add increased uncertainty to projections of foreseeable impacts. For example, while some climate impacts can be modeled on a continental scale, it is difficult to assess impacts of climate change at a localized level. In these cases, climate impacts threats should be only projected to the degree to which accurate projections at the local level can be made. In

addition, climate change increases the error associated with assessments of extinction risk within the period forecasted as foreseeable.

- b. Suggested Changes:
 - 1. Use of climate models to assess impacts at localized levels should be constrained to the bounds of certainty within the models. They should not be used to project impacts beyond those that can be determined with an acceptable degree of certainty. Clarifying the parameters of models and the acceptable amount of risk in modeling future impacts from climate change would require a change in implementing policy.
 - 2. The Services need to develop a rational, consistent and science-based framework for defining “acceptable” certainty and level of risk for use of climate models in relation to foreseeable future in listing decisions. Acceptable certainty and risk should take into consideration precision and/or error rates in model predictions as well as probability of outcomes of forecasted impacts or population viability rates and should be based on the best available science. This would require a change in implementing policy.

- 5. Designation of Critical Habitat:
 - a. The ESA requires that critical habitat be designated at the time of listing or within 1 year of listing. Yet the physical and biological features that may be “essential” to the conservation of the species or how the species may react to changing conditions may not be well known or understood. Also, critical habitat recognizes current existing habitat conditions that are to be kept in a set place over time. Climate change will modify those habitats potentially making them unsuitable or those actual suitable conditions may move geographically as the climate changes.

 - b. Suggested changes:
 - 1. Make designation of critical habitat a discretionary action for climate change related listings. Designation of critical habitat is non-discretionary under the law, changing this to a discretionary action will require a legislative change and congressional action. Some flexibility in designating critical habitat may also be achieved through new regulations clarifying when critical habitat designation is not prudent or determinable.
 - 2. Focus designation of critical habitat on areas known to be most in need of protection due to the impacts of climate change – e.g. breeding grounds or migratory routes - and where such designation can have a meaningful impact on species viability. Changing the focus and definition of critical habitat areas will require a change in the definitions for critical habitat in the law and will require congressional action.
 - 3. Include a review of CH designations during the 5-year status review process, where CH may be modified according to need. The

- Services currently have this flexibility and implementing this would require a broadening in the 5-year status review procedures and a change in implementing policy.
4. Move CH designation to the Recovery Planning Process and provide the flexibility to identify and map essential habitat in the recovery planning process – in lieu of the mandatory designation during the listing process. Designation of critical habitat at the time of listing is non-discretionary under the law, providing the flexibility to move this to the recovery planning process will require a change in the statute and congressional action.
 5. Incorporate adaptive management approaches and analysis for modification of CH. Clarifying the parameters to consider in making a modification in CH would require a change in implementing policy.
6. Recovery Standards for Delisting or Uplisting.
- a. Once a species is listed under the ESA, standards for delisting and uplisting a species are defined as part of the development of a recovery plan. The uncertainty associated with climate change will make it more difficult to develop and assess delisting and uplisting criteria as well as the population viability analysis that form the foundation for establishing these criteria.
 - b. Suggested Changes:
 1. Given the uncertainties associated with climate change, uplisting and delisting criteria need to remain flexible. Clarifying the parameters to consider in establishing uplisting and delisting criteria for recovery plans would require a change in implementing policy.
 2. The probability of extinction thresholds that define uplisting and delisting criteria should be limited to the realistic “foreseeable future”; that is some specified number of generations or some period for which the future can be predicted with confidence. Clarifying the parameters to consider in establishing uplisting and delisting criteria would require a change in implementing policy.
7. Triage and Decisions to take No Further Conservation Measures.
- a. As climate changes, ecosystems and their supported species will change. Climate change may increase the risk of extinction for approximately a quarter of the world’s biodiversity and result in a conservation crisis unparalleled in our history. Some species with specialized habitat needs, restricted range, or narrow environmental tolerance may not be able to adapt to range-wide changes in conditions and survive in current habitat. It is hoped that in most cases, plants and animals will be able to disperse into adjacent viable habitat on their own, or with human assistance, as viable habitat conditions and species

compositions shift with changing climate. There will be cases, however, where some habitats completely disappear and where human intervention cannot prevent the process and loss of associated species. Examples include island and coastal habitats and associated plant and animals at risk from rising sea level changes, or desert streams and pools that may dry-up and the fresh water fish and invertebrates that will be lost, or alpine species that may disappear as temperatures rise and alpine habitats disappear in southern regions. Interventions for species on the brink of extinction can be successful; however, recovery of entire systems threatened by rapid climate change is a much greater challenge.

Conservation decisions will involve sometimes difficult decisions such as do you introduce a disappearing species into a new location outside its current range (the Noah's Ark strategy). Under current regulations, non-essential experimental populations and essential experimental populations can be established outside of historic ranges. Some state Section 6 Cooperation Agreements however currently prohibit State agencies from introducing a species outside its historic range without going through a lengthy permitting process. Will it be acceptable to establish areas to introduce disappearing species or assemblages of species to prevent their extinctions in the wild? What if there are predicted affects on native species that the newly introduced species may displace or prey on? Do we have or need the regulatory flexibility to decide at some point that the situation is futile and no further conservation actions will be taken to try and save a species whose habitat no longer exists, and thereby allow species to go extinct in the wild.

As larger and more frequent deleterious affects occur due to climate change, will it be necessary to have the regulatory flexibility to prioritize what species to act on first, and where to focus time, resources and management actions to maximize benefits. Court decisions and ESA regulations do not give the agencies the flexibility, if faced with an onslaught of listing petitions, to decide which listing action to pursue first or to decide not to pursue multiple listings if one regulatory action would fill the conservation needs of many to prevent repetitive, time and resource draining administrative processes. Likewise, court decisions under the current regulatory framework and ESA statutes may be used to require specific management actions that may not represent the best use of resources or achieve the most beneficial management results. As difficult and sometimes competing management decisions are called for, agencies need the flexibility to set priorities and make decisions based on needs of many, sometimes at the expense of an individual species.

- b. Suggested Changes:
 - 1. Provide increased flexibility in State Section 6 Cooperative Agreements to allow the introduction of a species into an area outside its historic range if necessary to prevent extinction. Stream-line the federal regulatory process to make designation of

- experimental populations more efficient and timely. Providing increased flexibility in State Section 6 Cooperative Agreements and stream-lining the federal regulatory process would require a change in implementing policy and probably the generic experimental population regulations.
2. Provide regulatory flexibility to triage and select priority species to make listing decisions on or delay listing decisions, or to set priorities for taking management actions that would benefit multiple species even if at the detriment of a few. Providing flexibility to prioritize the listing of some and delay the listing of others would be facilitated by revising the listing priority guidance, but may require a change in the listing regulations as well. Achieving the flexibility to take management actions that disadvantage some listing species will depend upon the degree of impact to the disadvantaged species. Limited incidental taking, for example, can be authorized through 4(d) rules, section 10 permits, or Section 7 incidental take statements. Policy clarification on the use of these various tools in such circumstances would be helpful.
 3. Provide regulatory flexibility to cease conservation efforts (ceasing to spend money on affirmative recovery efforts) if intervention is futile. This would not include ceasing to apply the Section 10 prohibitions (against taking, commerce, etc.), or the Section 7 consultation requirements. This would provide the ability to allow a species to go extinct in the wild and use resources more productively elsewhere for other species. Providing flexibility to cease conservation efforts could be done with policy clarification.

Conclusions:

The consequences of climate change will result in changes in ecosystems and habitats for fish and wildlife resources including the geographic shift of habitat conditions and movement of species that occupy those habitats. Some species will increase under changing climate conditions and some will likely become extirpated or extinct. Climate change will also exacerbate other impacts to fish and wildlife resources such as habitat fragmentation, degradation, and loss from changing land uses, pollution and sedimentation, and the spread of deleterious or invasive species which may push more species into the status that they need the protections of listing under the ESA.

The ESA needs to be more effective in focusing protections and resources to minimize losses of endemic and indigenous biodiversity and maximize benefits to as large a range of species as possible. The ESA and its implementation needs to be able to readily accommodate innovation that will be developed and needed to meet the changing uncertain future with climate change and it will need to remove barriers to greater participation at the federal, state and local level to effectively address and manage impacts.

The accelerated time period for climate changes will challenge 21st century resource agencies to anticipate and manage for systemic changes. The ESA is inadequate in many respects for meeting this challenge and application of the ESA must focus on those circumstances where it can contribute effectively to conserving species and ecosystem functions.

The best way to preserve the nation's biodiversity in an uncertain future is to take broad landscape-scale approaches that manage and maintain healthy ecosystems as the core condition for species conservation combined with coordinated, comprehensive, management approach that benefits "clusters" or "guilds" of species with remedies that protect and restore the few and benefit the many. It is paramount that all parties actively pursue new sources of funding to effectively respond to the future needs of imperiled species and identify and develop regional partnerships to address common goals and strategies to address those needs and communicate those to policy makers and the public.