



RECOMMENDATIONS
FOR THE
OBAMA
ADMINISTRATION
TO
ADVANCE
THE
SCIENTIFIC
FOUNDATION
FOR
CONSERVING
BIOLOGICAL DIVERSITY

2013-2017



Society for Conservation Biology



Society for Conservation Biology

The Society for Conservation Biology (SCB) is an international professional organization dedicated to promoting the scientific study of the phenomena that affect the maintenance, loss, and restoration of biological diversity. The Society's membership comprises a wide range of people interested in the conservation and study of biological diversity: resource managers, educators, government and private conservation workers, and students make up nearly 5,000 members world-wide.

The Society for Conservation Biology envisions a world where people understand, value, and conserve the diversity of life on Earth. We envision SCB—a global community of conservation professionals—as a leading scientific voice for the study and conservation of Earth's biological diversity.

Contents

- 3 Foreword
- 4 Introduction
- 6 Addressing Climate Change
- 11 Strengthening Our Environmental Laws
- 16 Enhancing Scientific Integrity
- 19 Enhancing International Cooperation
- 22 Acknowledgements
- 23 References



FOREWORD

As one of the founders of the science of conservation biology and as the second president of the Society for Conservation Biology, it is a pleasure and honor to provide a few introductory words to these recommendations for Obama's second term.

The first book on the new field, *Conservation Biology*, was published in 1980 based on the first conference on the subject. The Global 2000 Report to the President was also published in 1980. And that was the year the term biological diversity was first used. The Earth Summit was a dozen years off and would culminate in three major environmental conventions (biological diversity, climate change, and desertification).

It is instructive to reflect on the degree of environmental change—for the better and for the worse—that has taken place in the ensuing 33 years. It is quite extraordinary how the human impact on the environment has deepened and become more diversified and complex, both in positive and negative ways. Global population is now seven billion (three times what it was when I was born) and at least another two billion are anticipated to lift the global total to at least nine billion. Science only really awoke to ocean acidification eight years ago.

Our science has also changed. Information and technology have exploded, affecting both science and communication. Our handheld devices have more computing power than the mainframe on which I did my dissertation analyses.

What might the future hold, and how can our science help anticipate appropriate management options? It is clear—to paraphrase the Revisiting Leopold Report on science and management of the national parks—that we must manage for continuous change that we will never fully understand.

We also must face management challenges from the local scale to the regional—and yet greater—which will require much more integrated approaches to managing the land, aquatic, and marine resources of our nation. Indeed, I think it is quite clear that we actually need to proactively manage our planet as the linked physical and biological system that it is.

The recommendations in this report are offered as a constructive contribution to the scientific challenges of managing and conserving the biological diversity of the nation. They are the best effort of the conservation biology community to assess the scientific needs for managing the nation's biological resources for the benefit of current and future generations of Americans. We can be certain they will probably need refreshing before four years are behind us. The growing understanding of the violation of planetary boundaries for climate change, nitrogen, and biodiversity (through extinction) simultaneously enlarges and refreshes the requisite scientific agenda as it similarly affects management imperatives.

In the end we need to remember that all environmental problems—by definition—affect living systems. That means biodiversity integrates the impact of all environmental problems and makes conservation the hardest of all environmental challenges. At the very same time, the opportunity for human benefit from scientific revelation of the wonders of living systems is inherent in the very biodiversity we struggle to understand and conserve.

— Dr. Thomas E. Lovejoy

Biodiversity Chair, The H. John Heinz
III Center for Science, Economics and
the Environment

University Professor Environmental
Science and Policy, George Mason
University

RECOMMENDATIONS FOR THE OBAMA ADMINISTRATION TO ADVANCE THE SCIENTIFIC FOUNDATION FOR CONSERVING BIOLOGICAL DIVERSITY

Four years ago, the Society for Conservation Biology (SCB) briefed the transition team of the newly elected Obama administration on a set of recommendations that would advance the scientific foundation for conserving biological diversity, the genetic diversity, species, ecosystems, and biological process of Earth.¹ As a global community of conservation professionals, SCB's top priority is to make sure that the best available science informs environmental policy. As President Obama begins his second term we offer updated recommendations through the lens of protecting biological diversity and with the hope that these recommended actions will serve as a guide to strengthen and enhance the implementation of existing environmental laws.

In his State of the Union address President Obama stated that if Congress does not act soon to protect future generations from climate change, he would direct his Cabinet "to come up with executive actions we can take, now and in the future,

to reduce pollution, prepare our communities for the consequences of climate change, and speed the transition to more sustainable sources of energy." SCB members share the president's conviction on climate change. We urge the administration to elevate climate change as a top priority not only because of the damage climate change will do to the natural environment, but also because of the implications it will have for human health and national security. We are ready to serve as ambassadors to educate the public on the issue of climate change and look forward to working with both the administration and Congress on this critical issue.

This year also marks the 40th anniversary of the Endangered Species Act. What better way to celebrate this landmark law than by strengthening and sharpening the existing tools provided by the Act to better preserve and restore biological diversity? The president can secure his environmental legacy by fully leveraging the power of the Endangered Species Act, the National Environmental Policy Act, the

Clean Air Act, the National Forest Management Act, and other environmental laws. This administration can strengthen the critical regulations and policies to implement the protections provided for by these laws by taking the following steps:

- **Take bold action to reduce greenhouse gas emissions**
- **Develop strategies to adapt to the effects of climate change**
- **Protect species at risk of extinction and restoring their ecosystems**
- **Manage public lands holistically to ensure long-term sustainable use**
- **Ensure scientific integrity in the decision-making process**
- **Increase international cooperation on the protection of biological diversity**
- **Reduce the spread of invasive species**

In addition to commemorating the 40th anniversary of the Endangered Species Act in 2013, the nation will celebrate important historic environmental events in the president's second term. Next year is the 50th anniversary of the Wilderness Act, and 2016 is the centennial of the National Park Service. These events give us the opportunity to celebrate the achievements we have made in protecting our wildlands and wildlife and reflect on what protections will be needed in the future for the stewardship of our living natural heritage.

The Society for Conservation Biology looks forward to continuing cooperation with the Obama administration and Congress on critical environmental issues and to protecting biological diversity now and in the future.

Recommendations presented by:

The Board of Governors,
Directors, Members, and Staff

Society for Conservation
Biology

April 2013



Society for Conservation Biology

SCB recommends that decision makers consider the full range of ecosystem services—such as the carbon sequestration potential of kelp forests—when making policy decisions regarding the management of natural resources.



1

ADDRESSING CLIMATE CHANGE

Global climate change is perhaps the greatest challenge the president and the nation will face in protecting our environment and the nation's biological diversity.

The administration made significant progress in addressing climate change over the past four years. Under its existing authority, the Environmental Protection Agency (EPA) determined that greenhouse gases endanger public welfare, the legal prerequisite for limiting greenhouse gas emissions under the Clean Air Act. Shortly thereafter, the EPA and National Highway Traffic Safety Administration established new, stringent fuel efficiency standards that will double mileage standards in cars and light trucks over the next decade.

President Obama also took action on October 5, 2009 to address climate change by issuing Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, which set forth a process to reduce

the greenhouse gas emissions caused by the operation of federal agencies within the executive branch of the government. Despite these significant steps forward, much more needs to be done to address the growing threat of climate change. To catalyze the nation's response to this challenge, SCB recommends that President Obama convene a national climate summit to advance a conversation that will develop new and innovative ways of addressing climate change over the next four years. In addition to developing new strategies, the president and his administration already have a suite of tools under existing environmental laws and treaties to address greenhouse gases right now. Accordingly, SCB recommends the administration take action in the following three general





Global warming is accelerating the melting of arctic ice and glaciers, which in turn raises sea levels. Continued unchecked greenhouse gas emissions will push additional ecosystems beyond tipping points, with potentially devastating effects on biodiversity.

areas to comprehensively address climate change: domestic policy, international policy, and the private/market sector.

DOMESTIC MEASURES

The Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and other laws already provide the administration with powerful legal mechanisms to mitigate climate change by reducing emissions, and to adapt to climate change that will likely occur given the level of greenhouse gases in the atmosphere today. SCB recommends the following actions under domestic law to address climate change:

- **Regulate greenhouse gases under the Clean Air Act.** The EPA should continue to implement New Source Performance Standards (NSPS) on carbon dioxide emissions and develop NSPS standards for methane and nitrous oxide under Section 111 of the Clean Air Act, which addresses all non-criteria and nontoxic pollutants emitted into the atmosphere. The EPA should aggressively regulate hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), nitrogen trifluoride (NF₃), and other exotic chemical gases with low emission levels but high global warming potential under Section 112 of the

Clean Air Act. This allows for the rapid regulation and elimination of particularly harmful pollutants from both new and existing electric generation and industrial emitters. The EPA should continue to reduce all sources of particulate pollution, especially black soot, which is one of the main short-lived drivers of climate change.

- **Impose a moratorium on pipelines that ship tar sands products.** The Obama administration should impose a moratorium on the approval of any pipeline being proposed to transport or import tar sands products until the final comprehensive environmental impact statement under NEPA is reviewed and completed. The assessment should review both the climatic and the biological diversity impacts from tar sands production.² We also recommend that the assessment be peer-reviewed by scientists with a broad set of expertise. Extraction of petroleum products from tar sands



SCB has requested that the State and Interior Departments complete a rigorous biological opinion as to whether the construction and operation of the Keystone XL pipeline will jeopardize the continued existence of the Whooping Crane.

production has resulted in serious environmental contamination in Canada in and around the tar sands development area. The Keystone XL pipeline, as proposed, threatens to pollute both the breeding habitat and the migration route of the endangered whooping crane.

- **Revise and strengthen the pollution standards for ground-level ozone.** In 2008, the Bush administration revised the ambient air standard for ground-level ozone under the Clean Air Act. However, this standard has been widely criticized as inadequate to protect human health and the public welfare. Setting a more stringent primary national ambient air quality standard for ozone levels supported by the best available science would have significant public health benefits. In addition, secondary standards for ground-level ozone should be established that are protective of biological diversity. Because ozone is created partly by nitrous oxide— itself a greenhouse gas—an improved ozone standard would result in significant climatic benefits by reducing greenhouse gas emissions.
 - **Consider climate change in environmental decision-making.** The Council on Environmental Quality (CEQ) should expeditiously
- develop regulations for conducting NEPA analyses that consider the climate change effects of federal agency actions, and evaluate alternatives that can mitigate and limit the emissions of the six primary greenhouse gas drivers and black soot. In particular, NEPA regulations should detail how to consider climate change impacts in land and resource management decisions.
- **Manage public lands for ecosystem services, including long-term carbon storage within intact and carbon-dense ecosystems.** The administration should strongly encourage all of the federal land management agencies to implement management strategies that will mitigate and reduce greenhouse gas emissions, sequester additional carbon dioxide on public lands, and improve the adaptation capacity of those lands in light of climate change. SCB recommends that the land-management agencies improve their performance in measuring, reporting, and reducing greenhouse gas emissions caused by their activities and those private activities that they permit. Additionally, land management agencies

should strengthen their ability to conserve and protect water resources, leverage public lands management to develop responsible renewable energy, and preserve ecosystem services provided by public lands.

INTERNATIONAL MEASURES

Although the above domestic policy recommendations would represent a significant step forward, climate change cannot be fully addressed unless the United States re-engages with the international community to find global solutions to climate change. While not achieving binding standards internationally, the administration did make some progress in the international arena by working with groups of nations who pledged to voluntarily share clean technologies to reduce carbon dioxide and the other major greenhouse gases. However, until

a binding global treaty is established, these measures will only partially address the threat of climate change. Accordingly, SCB recommends the administration take the following actions in the international arena:

- **Re-engage in international negotiations.** The United States should take a lead role under the United Nations Framework Convention on Climate Change to develop a new binding protocol that caps global greenhouse gas emissions and requires rapid reductions of greenhouse gases along with binding obligations for nations to restore and conserve carbon-sequestering ecosystems.³
- **Ban greenhouse gases with high global-warming potential.** The United States is already a party to the Montreal Protocol on Substances that Deplete the Ozone Layer. Because several greenhouse gases also

deplete the ozone layer, the Montreal Protocol can be used to help phase out several gases, including hydro-fluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). The United States should sponsor and support efforts to regulate and rapidly phase out the use of these gases through the Montreal Protocol.

- **Use trade measures to address environmental degradation.** The administration should direct the U.S. Trade Representative and the Secretary of State to use each new or pending trade agreement—such as the Trans-Pacific Partnership and the recently proposed Atlantic Free Trade Agreement—to address climate change and ensure that stringent environmental standards are maintained.³
- **Adopt and support only responsible forms of REDD.** The administration should seek to ensure that actions taken pursuant to the Agreement on Reducing Emissions from Deforestation and Forest Degradation (REDD) are



Mule deer at the Wild Rose Conservation Site (WRCS) in Alberta, Canada. WRCS is home to one of the offset projects SCB supports to offset carbon emissions associated with the Society's international conferences. Photo: Brad Taylor, Alberta Conservation Association.

done in a manner that complies with the best science and applicable international conservation treaties, including the Convention on Biological Diversity. REDD programs should focus on providing means for conserving and restoring all types of carbon-dense ecosystems around the world, such as native grasslands and tropical, boreal, temperate, and kelp forests, which can help to sequester carbon dioxide and other greenhouse gases.

MARKET MECHANISMS

The market can help develop new technologies to address climate change. To promote green investments from the private sector, the administration should provide financial support or guarantees to develop



Solar panels and electric cars exemplify cleaner technologies that will reduce greenhouse gas emissions.

green investments. At the same time, the administration should phase out subsidies and financial support of industries that produce large amounts of greenhouse gas emissions. SCB recommends the following:

- **Use the power of federal procurement to support green industries.**

The General Services Administration should develop strategies for purchasing goods that are environmentally friendly and that have a low carbon footprint.

- **Expand pension plans for federal employees to include greener options.**

The Office of Personnel Management should develop new guidance to open a wider range of retirement account choices for federal personnel and contractors so as to allow those individuals to choose greener stocks, bonds and other investments for their retirement portfolios.

- **Enhance support for renewable energy and efficiency.** Increasing energy efficiency is one of the least expensive and quickest ways to reduce greenhouse gas emissions. The administration should increase financial support for renewable energy and should allocate additional resources to improve energy efficiency

in government-owned buildings and facilities.

- **Greening foreign aid and international trade.** The main focus of the Rio+20 meeting in June 2012 was a pledge by countries to green their economies in support of the goals of the first Rio Conference and its treaties and agreements. The Obama administration should embrace these efforts to support green economic development around the world.

- **The President should work with Congress and the states to enact pollution taxes.** Taxing pollution internalizes greenhouse gas emissions, so that those enjoying the direct benefits of a product or service will pay for the resulting impacts. Taxing pollution will also encourage the development of technology that lowers overall emissions and environmental impacts. Revenues from such taxes could be used to facilitate the transition for individuals and businesses to more efficient and cleaner technologies. In addition, these revenues could be used to support activities that restore carbon-sequestering ecosystems and increase our adaptation capacity in a warming world.

2

STRENGTHENING OUR ENVIRONMENTAL LAWS

Our environmental laws provide powerful tools that can be used to protect our nation's biological diversity. However, many of the regulations and policies that implement these environmental laws have not been updated for 20 to 30 years.

As a result, the federal government is unable to fully leverage the potential power these laws can bring to bear for the protection of biological diversity in light of the conservation challenges of the 21st century. SCB recommends that the administration reform the critical regulations and policies that implement the mandates of the Endangered Species Act, the National Environmental Policy Act, and land-management statutes in order to better protect and restore our nation's biological diversity.

ENDANGERED SPECIES ACT

During the last four years, the Obama administration has taken action to correct some of the past abuses in the implementation of the Endangered Species Act (ESA). The Inspector General

of the U.S. Department of the Interior (DOI) identified decisions made by Bush-era political appointees that may have been made with improper political influence. The U.S. Fish and Wildlife Service (FWS) then revisited and reviewed these decisions. The administration has also taken steps to protect more candidate species (species previously identified that need protection under the ESA) than any other administration in the past 12 years. DOI withdrew the 2007 solicitor's opinion on the meaning of "significant portion of range" and revoked the 2008 regulatory change to the ESA's consultation process, which would have significantly weakened protections for all threatened and endangered species.



In February 2013, the Fish and Wildlife Service proposed to list the wolverine as threatened in the lower 48 states under the ESA because the snow pack wolverine's need for denning will rapidly decline due to climate change. Many significant federal actions can impact the climate. SCB recommends that agencies consult with FWS on the effects of these actions on the wolverine.

Other than the actions described here, implementation of the ESA has been very similar to that of the previous administration. Of greatest concern for SCB is the Obama administration's retrospective regulatory review initiative that was announced on January 31, 2011. This initiative is designed to target for elimination or reform, wasteful or outdated regulations that no longer perform their stated purpose. Rather than taking this opportunity to strengthen the scientific foundations of the ESA's implementation, FWS and the National Marine Fisheries Services (NMFS) (collectively "the Services") have primarily focused on regulatory changes that will further insulate agency decision-making from meaningful public and scientific review. SCB therefore recommends the following key changes to the ESA as the Services mark the 40th anniversary year of this landmark law:

- **Ensure the full geographic scope of recovery for imperiled species.** The Services should substantially revise the 2011 policy on "significant portion of range" to make clear that lost historic range can be a significant portion of a species' range for listing purposes, and define significance based on a species' persistence in distinct geographic ecoregions. The current draft policy fails to protect

species that have already experienced significant declines in their historic range.

- **Improve the process for designating critical habitat.** The Services should develop a timetable and plan to designate critical habitat for the approximately 800 listed species that do not have any designated critical habitat. Additional work should be done to estimate the ecosystem services benefits that critical habitat provides when deciding to exclude or include land in a species' critical habitat.⁵
- **Strengthen the regulations that protect critical habitat.** The Services should revise the regulatory definition of "destruction or adverse modification" of critical habitat to mean that any agency action that negatively impacts a species' critical habitat and impedes or slows recovery of that species rises to the level of destruction or adverse modification such that full mitigation of the agency action is required.⁶

In 2013, SCB recommended listing the Lesser Prairie-chicken as endangered and designating as critical habitat buffer zones around its mating display areas, or "leks." The Prairie-chicken has declined by 84-92 percent from its historic population levels.

- **Develop regulations to guide all aspects of the recovery planning process.** Regulations should define the term "recovery," require that recovery plans be based on the best available scientific information, and require that a majority of members on recovery teams be experts on the species for which the plan is being written. Recovery plans should include conservation measures that consider the impacts of climate change and facilitate the movement of listed species across the landscape as habitat conditions change into the future.
- **Develop a system that tracks take and other harm to listed species.** The Services currently lack the ability to track the number of individuals of each listed species that are harmed—including the number killed—that are a direct result of federal



government activities. A transparent, online system should be developed that allows the public to track the cumulative take for any listed species.

- **Modernize the Section 7 consultation process and restore its full geographic scope.** The Services should update the 1986 NMFS-FWS consultation handbook, which guides the analytical approach during the consultation process to assess jeopardy and destruction/adverse modification of critical habitat. Despite significant advances in the fields of conservation biology, population dynamics, connectivity, and conservation genetics, the handbook has not had a major update in over 25 years. The Services should also restore the global reach of the consultation process for all agency actions that may affect listed species outside of the United States, its territories, or the high seas.⁷
- **Develop standards for voluntary conservation programs to promote species recovery.** The Services should develop new guidance for all endangered voluntary conservation programs—including habitat conservation plans—so that all such programs provide a meaningful “net

conservation benefit” for listed species. Net conservation benefit should, at a minimum, be scientifically defined to result in a 2:1 ratio of voluntary conservation actions taken versus impacts to the protected species.⁸

- **Improve the success rate of translocations and reintroductions of listed species.** The Services should revise the 1984 regulations governing the reintroduction of experimental populations under the ESA. The current definition of “essential population” is inconsistent with the ESA’s stated objective: the recovery of listed species. The regulations are inconsistent with the basic principles of conservation biology with respect to the management of species that are critically endangered or extinct in the wild.

THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) is designed to ensure that all federal agencies take a careful look at the environmental consequences of their actions before making any significant decisions. In the last four years, the administration has taken steps to revitalize NEPA as an effective tool to foster



The jaguar is threatened with extinction throughout the Americas and is listed as an endangered species in the U.S. In 2012, SCB called for the designation of critical habitat throughout the species’ historic range in the U.S. to recover the jaguar.

environmentally responsible decision-making, including the publication of new guidance on the mitigation and monitoring of environmental impacts of a proposed project. The administration also developed new guidance to limit the use of the categorical exclusion, wherein agencies may move forward on proposed projects with only a minimal, cursory environmental review. However, the events of the Deepwater Horizon oil spill of April 20, 2010 and its aftermath demonstrate that NEPA must continue to be strengthened so that the effects of disasters are more likely to be avoided in the future. SCB recommends the following improvements for the implementation of NEPA:

- **Require consideration of the worst-case scenario in environmental decision-making.** The Council on Environmental Quality (CEQ) should re-establish the 1978 regulatory requirement that all environmental



The BP Deepwater Horizon oil spill demonstrated the need to consider the worst-case scenario in environmental impact statements. Following the spill, SCB led several scientific societies in asking the Obama Administration to assess fines for threatened and endangered species killed as a result of the spill. (U.S. Coast Guard photo.)

impact statements conduct a worst-case scenario analysis as part of the review process for all proposed environmentally significant activities.

- **Improve the management of federal offshore fisheries.** As required by the 2007 reauthorization of the Magnuson-Stevens Fishery Conservation Act, the National Oceanic and Atmospheric Administration should revise its regulations and procedures to achieve full compliance with NEPA and to ensure that the fisheries management councils fully consider the environmental impacts of their decisions.
- **Develop preventative measures to stem the flow of invasive species.** CEQ and the National Invasive Species Council should develop guidance on how NEPA can be used to evaluate actions and alternatives that might prevent or control the spread of invasive species as required by Executive Order 13112.
- **Re-evaluate agency exemptions from NEPA.**

The CEQ should re-evaluate whether EPA decisions that are not exempted by statute be required to comply with NEPA. Evidence suggests that the EPA's failure to conduct NEPA reviews—for example, on decisions related to the registration of pesticides—has resulted in substantial environmental harm and less transparency in agency decision-making.

PROTECTING AND RESTORING BIOLOGICAL DIVERSITY ON PUBLIC LANDS

The federal government owns and manages over 600 million acres of land—28 percent of the total land in the United States. Public lands provide a wide range of ecosystem services, including watershed protection, sequestration and long-term storage of carbon in ecosystems, wildlife habitat, and recreational opportunities. Preserving and restoring these lands—and the biological diversity they support—will require a landscape-focused approach on both public and private lands that is able to address climate change, landscape fragmentation, drought, and invasive species. The Obama administration

has taken many significant steps to improve biological diversity on public lands, including protecting roadless areas within the National Forest System, establishing the Landscape Conservation Cooperatives network, directing land management agencies to prepare adaptation plans for climate change, and increasing efforts to develop connectivity between areas of protected public lands.

Significant actions, however, should still be taken in the next four years to put our public lands on an ecologically sustainable path that protects biological diversity over the long-term. Most significantly, SCB is concerned that the Obama administration is underutilizing the president's powers granted under the Antiquities Act to designate new national monuments. The 2016 national parks centennial provides a unique opportunity for the president to add new protected areas via national monument designations. In addition, SCB is concerned that the new regulations that implement the National Forest Management Act on over 190 million acres of National Forests and Grasslands are inadequate to fully conserve biological diversity. Ongoing logging of old-growth forests in the Pacific Northwest by the Forest Service and the Bureau of Land Management (BLM) also threatens to undermine the long-term viability of many threatened species, and could significantly degrade some of the world's most carbon-dense ecosystems. SCB recommends the

following improvements in the implementation of our nation's public-lands laws:

- **Protect the diversity of plant and animal communities.** Under the National Forest Management Act, the Forest Service should develop guidance that commits the agency to direct monitoring of threatened and endangered species, focal species (indicator species), and other species of conservation concern to ensure that proposed forest activities do not diminish the viability or geographic distribution of such species over the longer term. SCB suggests that BLM use its full authority to modify existing regulations to define BLM's sustained yield mandates under the Federal Public Lands Management Act to ensure the conservation of viable populations of plants and animals on BLM-managed lands.
- **Implement ecological sustainability on public lands.** The land management agencies of the federal government should develop management practices to

encourage adaptation to climate change and the conservation of biological diversity in all national forests, grasslands, wildlife refuges, parks, and BLM and other public lands.⁹

- **Issue an executive order on landscape connectivity.** The president should issue an executive order requiring all agencies of the federal government to use their authority to preserve and restore connections between natural ecosystems and to protect large blocks of intact forests for their biological diversity and carbon storage potential. This executive order should also develop long-term incentives for private land stewardship with the goal of building a system of connected lands and waters managed to conserve biological diversity.
- **Re-assess fossil fuel extraction on public lands.** Before issuing leases, BLM and the Bureau of Ocean Energy Management should conduct an assessment

of potential cumulative climate impacts, and the impacts of habitat fragmentation from fossil-fuel energy development on public lands resources. As a condition of authorizing future leases, these assessments should include a full discussion of the potential impacts from habitat fragmentation from energy projects on public lands, as well as ways to minimize these impacts.

- **End logging in old-growth forests and transition all other logging to prioritize ecological restoration.** The carbon-dense forests of the United States—such as the Tongass National Forest of Alaska and the forests of the Pacific Northwest—serve as critical stores of carbon dioxide and act as important reserves for wildlife. The Obama administration should work to rapidly phase out all logging of old-growth forests on all public lands, and transition logging of second-growth forests toward the goal of ecological restoration.

This landscape corridor bridge connects fragmented habitat and helps wildlife cross barriers like roads. SCB is working with a larger coalition to develop new approaches that the federal government can use—such as an executive order—to identify, conserve, and restore essential habitat connections under existing laws.



3

ENHANCING SCIENTIFIC INTEGRITY

While it is critically important to advance the substantive mandates of our nation's environmental laws, it is equally important to ensure that the scientific process is protected from political interference.

President Obama made great strides toward restoring scientific integrity by issuing a Memorandum on Scientific Integrity.¹² This memorandum directed the White House Office of Science and Technology Policy (OSTP) to ensure that each federal agency develop procedures to identify and address instances where the integrity of the scientific process or the scientific information might be compromised. This memorandum declared that "the selection and retention of candidates for science and technology positions in the executive branch should be based on the candidate's knowledge, credentials, experience, and integrity." It also requires agencies to develop additional whistleblower protections to ensure the integrity of

scientific information in agency decision-making. Throughout the executive branch, at the cabinet secretary level and in agency offices, the administration appointed science advisors to assist cabinet secretaries on important policy issues and matters where scientific information is an important element in agency decision-making. Congress also took action to strengthen scientific integrity when it passed the Whistleblower Protection Enhancement Act of 2012.

As required by the Memorandum on Scientific Integrity, most federal agencies have made significant progress in developing scientific integrity policies to guide the use of science within agency activities. More work needs to be done,



In 2007 and 2008, SCB helped identify witnesses for a series of hearings and investigations and called for a new set of enforceable principles to protect scientific integrity. The hearings highlighted improper political interference that

however, to ensure that these scientific integrity policies fulfill their stated purposes and are institutionalized now and in the future. In particular, transparency and independence for scientific integrity officers is needed in evaluating claims for alleged scientific misconduct. Standardization and accountability to employees—and ultimately the public—is needed for agencies to remediate and address situations where scientific misconduct is found. SCB recommends that the administration strengthen scientific integrity and continue its efforts to depoliticize science in the following ways:

- **Increasing transparency and accountability in agency decision-making.** Agencies should continue improving policies that ensure the fullest possible public participation consistent with the law, post records of meetings online, and respond to Freedom of Information Act requests in an expedited manner. Agency employees, including scientists, should be given more latitude in being able to communicate with policy-makers and the public when they believe that scientific integrity has been compromised in the decision-making process. The Scientific Integrity Principles of the Department of the Interior and other departments

can be strengthened by clarifying what types of allegations to investigate and by providing standards on the independence of officials investigating claims of scientific misconduct.¹¹

- **Encourage and protect whistleblowers.** The natural resources agencies—and indeed the entire federal government—should encourage scientists to speak out about the abuse of science and protect scientists who do so from retaliation, as required by the Whistleblower Protection Act of 2012. To the extent necessary, SCB recommends that the agencies work on new guidance or regulations to codify the requirements of the Whistleblower Protection Act.
- **Encourage federal scientists' participation in the larger scientific community.** Due to a high-profile overspending controversy at the General Services Administration in 2011, the ability of government scientists to travel to scientific conferences has been severely curtailed. This response was disproportionate and threatens to limit the ability of federal scientists to share knowledge with the larger



harmed the Northern Spotted Owl, Klamath River salmon, and the Mexican wolf. Since then SCB has worked to establish and improve those principles along the lines recommended in this report.

Pictured: Northern Spotted Owl and the Klamath River.

scientific community. SCB recommends that scientists be allowed to freely travel to scientific conferences and continue to be encouraged to publish the results of their research in external peer-reviewed journals and to participate in scientific societies.

- **Improve employee morale by ending the federal government hiring freeze.** The ability of the government to make well-informed decisions based on the best science depends on the ability of the government to recruit and retain well-qualified scientists. Since 2011, there has been a virtual freeze on hiring permanent employees within the federal government. Young, entry-level employees often now work as short-term contractors for the federal government, which prevents them from becoming vested in the system. SCB recommends that the president end the hiring freeze on scientists in the federal government as a long-term investment in the nation's ability to remain competitive globally in conducting scientific research.

- **Limit the scope of interagency regulatory review.** SCB recommends that the Office of Management and Budget (OMB) and the Office of Information and Regulatory Affairs (OIRA) limit their review of regulations and policies designed to protect the environment and human health to those strictly permitted by statute. In the previous administration, OMB aggressively scrutinized the cost-benefit tradeoffs of environmentally protective regulations, which resulted in environmental standards being weakened, regulations being delayed beyond the statutory 90-day review period, and in some cases, environmental regulations being blocked. This administration's Executive Order 13563, Improving Regulation and Regulatory Review, continues these practices to the detriment of the environment and biological diversity. SCB recommends that Executive Order 13563 and its predecessor, Executive Order 12866, be revoked and regulatory review by OIRA be limited both in time and scope to considerations required by Congress in the rulemaking process.





4

ENHANCING INTERNATIONAL COOPERATION

Earth's biological diversity is under siege from an array of threats—many of which can only be addressed through cooperative international conservation actions.

The illegal trade of wildlife and plants—valued in the billions of dollars per year—is second only to the trade of illegal narcotics. Wildlife crime and its associated money-laundering, violence, and corruption is especially damaging in developing countries because it threatens the livelihood of rural communities, degrades entire ecosystems, and undermines the rule of law. Even regulated trade presents a significant threat to biological diversity because the movement of goods and services around the planet represents one of the primary vectors for the spread of invasive and non-native species.

Fully protecting biological diversity will require the United States to play an even more active role in international conservation efforts than it has in the past. This will require the United States to re-engage on a suite of international conservation treaties designed to protect biological diversity. The United States must also be more aggressive in ensuring that the legal import and export of goods does not endanger our biosecurity. Finally, the United States should strategically leverage its foreign aid to maximize environmental benefits, while minimizing environmental harms. SCB recommends the following actions to enhance global conservation efforts:



Since 2006, SCB has worked to help create the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The Society attended IPBES' first formal meeting in Bonn, Germany in 2013, where the president of SCB's Europe Section was named to IPBES' Multidisciplinary Expert Panel.

STRENGTHENING INTERNATIONAL CONSERVATION TREATIES

- **Continue participating in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.** The U.S. officially joined in creating the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in April 2012.¹² The U.S. should continue to play an active role by providing nominations to the Platform's administrative and expert panels, and provide support to ad hoc working groups tasked with assessing biological diversity and ecosystem services and support an open, transparent, and robust process to fulfill the need for policy-relevant scientific advice that is independent of any given government or regulatory body.
- **Encourage ratification of international environmental treaties.** The U.S. Secretary of State should ask the U.S. Senate to ratify the Convention

on Biological Diversity, the Convention on Migratory Species, the Convention on the Law of the Sea, and the Convention on Persistent Organic Pollutants.

- **Strengthen the conservation controls on the international trade of endangered species.** The U.S. Fish and Wildlife Service should work with the Convention on International Trade in Endangered Species (CITES) and IPBES to more thoroughly enforce the requirement of Article IV of CITES that trade of any species listed on Appendix II only occur if such species maintains its role in its ecosystems throughout its geographic range.

IMPROVING BIOSECURITY AND INTERNATIONAL TRADE

- **Comprehensively track the importation of plants and animals into the U.S.** Using the Department of the Interior's existing permit requirements and authorities, develop a real-time online database that allows the public, as well as other government agencies, to track the import and exports of plants and animals into the U.S. An online database would further

the objectives of CITES and potentially provide an early warning system to prevent the introduction of invasive/injurious plants and animals into the U.S.

- **Develop a holistic strategy to address invasive species.** Direct the Council on Environmental Quality (CEQ), the National Invasive Species Council, and the Animal and Plant Health Inspection Service to lead an inter-agency task force to develop a national strategy to prevent the introduction of non-native invasive species both into and out of the U.S. This strategy should also identify ways to mitigate the impacts of invasive species and to reduce or eliminate invasive species in locations where invasive species are already established in ecosystems and are causing harm to biological diversity.
- **Use bilateral and multilateral trade agreements to further environmental protection.** The United States should pursue trade agreements that expressly require national and international conservation standards be adopted through the application of



Rhinoceros are rapidly declining due to severe poaching as a result of growing demand for rhino horn in Asia. Trade sanctions provided for in U.S. law as well as increased law enforcement assistance from the U.S. could help reduce poaching and illegal trade in species like the rhinoceros.

the best available science and technologies.

- **Consider trade penalties and sanctions as a tool to address the poaching crisis in Africa and Asia.** Aggressively use the authority contained in the “Pelly Amendment” of the Fisherman’s Protective Act to address situations where the activities of nationals of a foreign nation are diminishing

the effectiveness of international conservation efforts, especially relating to the illegal trade in tiger parts, rhinoceros horn, elephant ivory and other critically endangered wildlife.

GREENING FOREIGN AID

- **Limit or eliminate funding for international development projects that are not sustainable.** The

Department of Treasury should strengthen its compliance with the requirements of Title XIII of the International Financial Institutions Act, and in particular for interagency coordination, to ensure that any project proposed by a multilateral development bank does not negatively affect the environment.

- **Require environmental analysis prior to funding international development projects.**

The Department of Treasury should continue to more fully implement Sections 1307 and 1308 of the International Financial Institutions Act to ensure that the U.S. does not vote in favor of any multilateral development bank action that would likely result in a significant impact on the environment unless a comprehensive analysis of potential cumulative

environmental impacts of the proposal—including climate change—has been conducted and disseminated in all appropriate languages in a timely manner. The environmental impact analysis should be available to potentially affected local communities to allow them an opportunity to understand and comment on the proposal.

- **Help build capacity in the developing world to address environmental harm.** The U.S. should urge the World Bank to include in its loans sufficient funding and conditions to ensure that any projects or programs it supports comply with the recipient nation’s own environmental laws and related treaty obligations as required by Section 1504 and 1505 of the International Financial Institutions Act.
- **End subsidies for fossil fuel-based projects around the world.** The U.S. should urge the World Bank to end financial subsidies and loans for fossil-fuel intensive development projects and redirect that funding for development projects based on increasing energy efficiency and the development of renewable energy.

ACKNOWLEDGEMENTS

| | |
|---------------------------|--|
| Paul Beier, Ph.D. | President, SCB |
| Barry Noon, Ph.D. | Chair, Policy Committee |
| Carlos Carroll, Ph.D. | Vice Chair, Policy Committee |
| Dominick DellaSala, Ph.D. | President, North America Section |
| Tom Sisk, Ph.D. | Chair, North America Section Policy Committee |
| Niel Lawrence, J.D. | Vice Chair, North America Section Policy Committee |
| Dinah Bear, J.D. | Chair, Legal Advisory Committee |
| Tom Lovejoy, Ph.D. | Former President of SCB |
| Ron Abrams, Ph.D. | Chair, SCB Footprint Committee |
| Jim Barrett, Ph.D. | Member, SCB Climate Policy Task Force |
| Kyle Gracey, M.S. | Co-Chair, SCB Treaties Task Force |

SCB POLICY COMMITTEE MEMBERS:

| | |
|----------------------|--|
| David Johns | At-Large Member |
| Jonsson Bengt Gunnar | At-Large Member |
| Paul Paquet | At-Large Member |
| Fiona Nagel | Chapters Representative |
| Per Sjögren-Gulve | Europe Representative |
| Jeff McNeely | Asia Representative |
| Delali Dovie | Africa Representative |
| Chris Parsons | Marine Representative |
| Wendy Jackson | Oceania Representative |
| Javier Simonetti | Latin America and Caribbean Representative |

SCB STAFF:

John Fitzgerald, J.D., Policy Director
Brett Hartl, J.D., Policy Fellow
Anne Hummer, Executive Director
Nate Spillman, Communications and Marketing Coordinator
Lauren Krizel, Administrative Assistant

www.conbio.org

For further information contact:

John Fitzgerald: 202-234-4133

or jfitzgerald@conbio.org

Society for Conservation Biology

1017 O St., N.W.

Washington, D.C. 20001



Society for Conservation Biology

SPECIAL THANKS TO:

The Wilburforce and Rasmussen Foundations for their support of SCB's policy program.



REFERENCES

- ¹In December of 2008, SCB presented its “Recommendations for actions by the Obama Administration and the Congress to advance the scientific foundation for conserving biological diversity” at a briefing to top-level officials in the Obama Transition Team. The recommendations can be found at: http://www.conbio.org/images/content_policy/SCB2008TransitionTeamRecommendations.pdf; For SCB’s definition of biological diversity, see Hannah, Lee and Thomas Lovejoy. 2005. *Climate Change and Biodiversity*. Yale University Press, page 3.
- ²The Keystone XL EIS and its accompanying Biological Opinion should be completed in such a way as to fully address how the federal government will fulfill its conservation duties arising under all existing environmental laws and treaties, including the Migratory Bird Treaties and the Convention on Nature Preservation in the Western Hemisphere. In 2010 and 2011, SCB submitted formal comments to the State Department requesting that the Biological Opinion on the pipeline’s impacts on biodiversity consider the potential impacts that will occur on both the United States’ and Canadian side of the international border. SCB’s comments can be found at <http://www.conbio.org/policy/scb-policy-statements>.
- ³The current negotiation schedule agreed to at the 2011 UNFCCC meeting in Durban calls for a new international agreement by 2015 to take effect in 2020. We believe that the second Obama administration should advance this process as quickly as possible.
- ⁴The Secretary of State should also consider the application of Section 115 of the Clean Air Act with respect to bilateral and multilateral agreements between the United States and other nations to reduce global warming pollutants. Progress has been made toward enhanced environmental trade provisions in recent Free Trade Agreements, but they are neither comprehensive nor easily enforced.
- ⁵Comments by the Society for Conservation Biology’s North America Section Regarding the Economic Analysis of the Revised Critical Habitat for the Northern Spotted Owl. July 5, 2012. Available at: http://www.conbio.org/images/content_policy/2012-7-5_SCB_Spotted_Owl_Economic_Analysis_Comments.pdf.
- ⁶In 2005, a Federal Circuit Court of Appeals held that the Fish and Wildlife Service’s existing regulation which defines “destruction or adverse modification” of critical habitat violated the Endangered Species Act. On July 5, 2012, SCB petitioned the FWS to revise its defunct regulatory definition. See “Petition for Rulemaking to Define the Term ‘Destruction or Adverse Modification’ of Critical Habitat and to Improve the Regulations Governing the Designation Process for Critical Habitat” available at: http://www.conbio.org/images/content_policy/2012-7-5_SCB_Adverse_Modification_-_Critical_Habitat_Petition.pdf.
- ⁷SCB recommended that the FWS and NMFS restore the global scope of Section 7 consultations as part of its 2008 Recommendations to the Obama Administration. On July 12, 2012, SCB petitioned the FWS and NMFS to restore the consultation requirement. See “Petition for Rulemaking to Restore the Global Scope of Interagency Consultations under the Endangered Species Act” available at: http://www.conbio.org/images/content_policy/SCB_Petition_to_Restore_Section_7_Consultations_Global_Scope.pdf.
- ⁸SCB submitted extensive comments on ways to improve voluntary conservation under the ESA on July 12, 2012. See “Comments by the Society for Conservation Biology on Expanding Incentives for Voluntary Conservation Actions Under the Endangered Species Act” available at: www.conbio.org/images/content_policy/2012-7-12_SCB_Comments_on_Voluntary_Conservation_Under_the_ESA.pdf.
- ⁹For a definition of ecological sustainability, see U.S. Forest Service. 1999 *Sustaining the People’s Lands: Recommendations for Stewardship of the National Forests and Grasslands into the Next Century*. USFS Committee of Scientists, March 15, 1999, available at: <http://www.fs.fed.us/emc/nfma/includes/cosreport/Committee%20of%20Scientists%20Report.htm>. We also recommend to the administration that it take up the advice of the 2012 report from the Advisory Commission on the National Parks: Revisiting Leopold: Resource Stewardship in the National Parks, available at: http://www.nps.gov/calltoaction/PDF/LeopoldReport_2012.pdf; and we continue to support the recommendations of the Western Landscapes Conservation Series of Northern Arizona University, see <http://www.westernconservation.org>.
- ¹⁰The White House. 2009. Memorandum for the Heads of Executive Departments and Agencies on Scientific Integrity. Mar. 9, 2009 available at <http://www.whitehouse.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-3-9-09>.
- ¹¹As an example of where the Scientific Integrity policy needs improvement, in 2012 an agency scientist who helped write the Department of Interior’s Scientific Integrity Principles later filed a complaint to enforce them on his own behalf. The complaint is available at: http://www.peer.org/assets/docs/doi/8_8_12_Houser_Critique_DOI_Scientific_Integrity_Policy.pdf.
- ¹²For information on the terms of reference for IPBES and the United States agreement to join the international platform, see http://www.ipbes.net/component/docman/doc_download/1024-ipbes-resolution.html?Itemid=159.

A lone mangrove tree on incoming tide. Mangrove trees create habitat for many animal and plant communities, as well as acting as natural buffers on coastlines to prevent erosion and storm surge. As sea levels rise and hurricanes become more frequent and severe, mangroves are more important than ever.

RECOMMENDATIONS
FOR THE
OBAMA
ADMINISTRATION
TO
ADVANCE
THE
SCIENTIFIC
FOUNDATION
FOR
CONSERVING
BIOLOGICAL DIVERSITY



Society for Conservation Biology

A global community of
conservation professionals

1017 O St. N.W.
Washington, D.C. 20001
WWW.CONBIO.ORG
+1-202-234-4133

