AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

THE SCIENCE OF HOW HUNTING ASSISTS SPECIES CONSERVATION AND MANAGEMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

TUESDAY, JUNE 19, 2012

Serial No. 112–90

Printed for the use of the Committee on Science, Space, and Technology

Available via the World Wide Web: http://science.house.gov

U.S. GOVERNMENT PRINTING OFFICE

74–727PDF WASHINGTON : 2012

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HON. RALPH M. HALL, Texas, *Chair*

F. JAMES SENSENBRENNER, JR., Wisconsin
LAMAR S. SMITH, Texas
DANA ROHRABACHER, California
ROSCOE G. BARTLETT, Maryland
FRANK D. LUCAS, Oklahoma
JUDY BIGGERT, Illinois
W. TODD AKIN, Missouri
RANDY NEUGEBAUER, Texas
MICHAEL T. McCAUL, Texas
PAUL C. BROUN, Georgia
SANDY ADAMS, Florida
BENJAMIN QUAYLE, Arizona
CHARLES J. "CHUCK" FLEISCHMANN, Tennessee
E. SCOTT RIGELL, Virginia
STEVEN M. PALAZZO, Mississippi
MO BROOKS, Alabama
ANDY HARRIS, Maryland
RANDY HULTGREN, Illinois
CHIP CRAVAACK, Minnesota
LARRY BUCSHON, Indiana
DAN BENISHEK, Michigan
VACANCY

EDDIE BERNICE JOHNSON, Texas
JERRY F. COSTELLO, Illinois
LYNN C. WOOLSEY, California
ZOE LOFGREN, California
BRAD MILLER, North Carolina
DANIEL LIPINSKI, Illinois
DONNA F. EDWARDS, Maryland
BEN R. LUJÁN, New Mexico
PAUL D. TONKO, New York
JERRY McNERNEY, California
TERRI A. SEWELL, Alabama
FREDERICA S. WILSON, Florida
HANSEN CLARKE, Michigan
SUZANNE BONAMICI, Oregon
VACANCY
VACANCY
VACANCY

SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT

HON. PAUL C. BROUN, Georgia, *Chair*

F. JAMES SENSENBRENNER, JR., Wisconsin
SANDY ADAMS, Florida
RANDY HULTGREN, Illinois
LARRY BUCSHON, Indiana
DAN BENISHEK, Michigan
VACANCY
RALPH M. HALL, Texas

DONNA F. EDWARDS, Maryland
ZOE LOFGREN, California
BRAD MILLER, North Carolina
JERRY McNERNEY, California
EDDIE BERNICE JOHNSON, Texas

CONTENTS

Tuesday, June 19, 2012

	Page
Witness List	2
Hearing Charter	3

Opening Statements

Statement by Representative Paul C. Broun, Chairman, Subcommittee on Investigations and Oversight, Committee on Science, Space, and Technology, U.S. House of Representatives	10
Written Statement	11
Statement by Representative Paul D. Tonko, Ranking Minority Member, Subcommittee on Investigations and Oversight, Committee on Science, Space, and Technology, U.S. House of Representatives	12
Written Statement	14

Witnesses:

The Hon. Daniel Ashe, Director, U.S. Fish and Wildlife Service	
Oral Statement	16
Written Statement	19
Dr. Al Maki, Chairman, Conservation Committee, Safari Club International	
Oral Statement	27
Written Statement	29
Dr. Stuart Pimm, Professor, Nicholas School of the Environment, Duke University	
Oral Statement	34
Written Statement	36
Mr. Nick Wiley, Executive Director, Florida Fish and Wildlife Conservation Commission	
Oral Statement	39
Written Statement	41
Discussion	43

Appendix: Answers to Post-Hearing Questions

The Hon. Daniel Ashe, Director, U.S. Fish and Wildlife Service	55
Dr. Al Maki, Chairman, Conservation Committee, Safari Club International	59
Mr. Nick Wiley, Executive Director, Florida Fish and Wildlife Conservation Commission	62

THE SCIENCE OF HOW HUNTING ASSISTS SPECIES CONSERVATION AND MANAGEMENT

TUESDAY, JUNE 19, 2012

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, DC.

The Subcommittee met, pursuant to call, at 2:23 p.m., in Room 2318 of the Rayburn House Office Building, Hon. Paul Broun [Chairman of the Subcommittee] presiding.

RALPH M. HALL, TEXAS
CHAIRMAN

EDDIE BERNICE JOHNSON, TEXAS
RANKING MEMBER

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6301
(202) 225–6371
www.science.house.gov

Subcommittee on Investigations & Oversight Hearing

The Science of How Hunting Assists Species Conservation and Management

Tuesday, June 19, 2011
2:00 p.m. to 4:00 p.m.
2318 Rayburn House Office Building

Witnesses

The Honorable Daniel Ashe, Director, U.S. Fish and Wildlife Service

Dr. Al Maki, Chairman, Conservation Committee, Safari Club International

Dr. Stuart Pimm, Professor, Nicholas School of the Environment, Duke University

U.S. House of Representatives
Committee on Science, Space, and Technology
Subcommittee on Investigations & Oversight

HEARING CHARTER

"The Science of How Hunting Assists Species Conservation and Management"

Tuesday, June 19, 2012
2:00 p.m. – 4:00 p.m.
2318 Rayburn House Office Building

Purpose

On Tuesday June 19, 2012, the Subcommittee on Investigations and Oversight will hold an oversight hearing to examine the science used to inform wildlife management decisions that involve hunting. The federal government encourages hunting on some federal lands for numerous reasons, including wildlife management, recreation, and subsistence. This follows the North American Wildlife Conservation Model in which 1) fish and wildlife belong to all Americans, and 2)they should be managed in a way to guarantee their permanent existence.[1] In addition to federal, state, and local public lands, privately owned game ranches also enable hunting of specific species of animals, including some that are either endangered or extinct internationally. These ranches play an important part in the effort to boost the overall numbers of certain species, including their reintroduction into the wild. Existing federal regulations that authorized limited hunting of these species have been challenged in federal courts, resulting in a January 2012 final rule issued by the Fish and Wildlife Service that poses new challenges to these game ranches.

Background

Hunting for subsistence predates the arrival of Europeans in North America with Native Americans hunting buffalo and other species for meat and hides. The arrival of European immigrants and the westward spread of America led to increased hunting for subsistence as well as unregulated hunting. For example, the American population of buffalo fell from an estimated 30 to 75 million in the 1800's to less than a million today.[2] Beyond North America, the growing human population has resulted in significant pressure on the survival of numerous large game animals. In Africa, various subspecies of large animals such as leopards, gazelles, and rhinoceros have been identified as endangered, threatened, or extinct due to a variety of causes

[1] Although widely recognized, there is no legal definition of the North American Wildlife Conservation Model that is partially based upon the 1842 Supreme Court case Martin v. Waddell - 41 U.S. 367 – that first established the concept of a public trust for wildlife.
[2] www.fws.gov/species/species_accounts/bio_buff.html

including competition with humans for land and illegal hunting. Currently, over 5,000 species of animals and 29,000 species of plants are identified as at risk internationally.[3]
On July 1, 1975, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) came into force to address the international trade in threatened and endangered species. Some 175 countries, including the U.S., are CITES signatories.[4] As a signatory, the U.S. and other countries are required to establish a permitting system to regulate the international transport of species identified by CITES as threatened or endangered. This permitting system attempts to indirectly limit illegal hunting by making it more difficult for illegally harvested animals, in whole or in part, to cross international borders.

The core sciences behind hunting

Efforts to increase the numbers of individual species require initial scientific study of the existing population and what impacts their population growth. For example, a common method of determining waterfowl population is the Lincoln-Petersen estimator that determines population estimates through banding of waterfowl and measuring the number of recaptured waterfowl over time. In the formula $N = n1 * n2/m2$, N is the estimate population where n1 is the number of waterfowl banded, n2 is the number of all waterfowl harvested whether banded or unbanded, and m2 is the number of banded waterfowl harvested.[5] Another scientific formula can then be used to determine survival rates based upon recoveries of dead waterfowl.[6] Manipulation of population densities by hunting and other means is also used to determine the impact of density on a species population.[7] This aids wildlife managers in determining what the appropriate level of hunting is to avoid malnourishment of a resident species.

Overpopulation / invasive species

In contrast to the species identified by CITES and the U.S. government as at risk, some species of animals are in overabundance in America, causing environmental problems of their own. Overpopulation of one animal species can result in damage to other plant and animal species including disturbances to the local environment caused by wandering animals and consumption of other plant and animal species for food that threatens their existence. An important component of overpopulation is scientifically determining what numbers constitute overpopulation instead of a normal balance. Federal, state, and local governments have addressed species overpopulations through a variety of measures including hunting.

One example of the issues faced when dealing with overpopulation of a species can be found in Rock Creek Park in Washington, DC. Rock Creek Park is part of the National Park Service (NPS) and is home to a large and growing number of deer. Due to a growing number of issues caused by deer overpopulation, NPS undertook a multi-year review to understand harmful

---

[3] See the appendices of the Convention of International Trade in Endangered Species for a complete list of species worldwide identified as at risk. The complete list is available at www.cites.org/eng/app/appendices.php.
[4] Complete list available at www.cites.org/eng/disc/parties/index.php.
[5] The Lincoln-Petersen estimator is named for an 1896 discovery by a Danish fisheries biologist, Carl Petersen, and its use by an American, Frederick Lincoln, to estimate U.S. waterfowl populations for the U.S. Bureau of Biological Survey, a predecessor agency of the U.S. Fish and Wildlife Service.
[6] G.A.F. Seber, Estimating time-specific survival and reporting rates for adult birds from band returns, Biometrika (1970) 57(2): 313-318 doi:10.1093/biomet/57.2.313.
[7] White, G.C. and R.M. Berman Effect of density reduction on overwinter survival of free-ranging mule deer fawns. Journal of Wildlife Management 62:214-225 (1998).

impacts of deer overpopulation and how best to reduce them. In a 592-page Environmental Impact Statement issued in December 2011, NPS scientists surveyed the park to determine that there were 67 deer per square mile in the park in contrast to less than a handful anywhere in the park only 40 years earlier.[8] This population increase harmed other species by competing for space, vegetation being trampled and eaten by the deer, a loss of young tree seedlings, and nonnative seed dispersal.[9]

To determine the harm caused by the deer, NPS scientists established paired vegetation plots, only one of which was fenced off from deer. Significantly more vegetation survived in the plots not accessible to deer.[10] NPS reviewed previous studies that identified high deer levels as causing undesirable effects on other wildlife species such as migratory birds.[11] Other harms resulting from overpopulation of deer were identified including malnourishment of deer and greater rates of accidents involving deer.

To determine the appropriate options for reductions in deer populations, NPS reviewed scientific studies in Illinois, Connecticut, and New York of the impact and costs of reproductive control to determine whether controlled hunts would be more or less effective. None of the scientific studies demonstrated that reproductive control was effective in sharply reducing initial deer numbers. Other studies demonstrated that the typical cost for either reproductive control or surgical sterilization was approximately $1,000 in personnel and medical cost per deer.[12] NPS recommended that a combination of hunting, reproductive control, and capture / euthanasia be used to reduce Rock Creek Park deer populations. However, it recognized that the majority of the population reduction would be due to hunting.

Hunting's Economic Support for U.S. Wildlife Conservation

The acquisition and operation of additional acreage for local, state, and federal land requires ongoing funding. Licenses and permits for legal hunts provide a significant portion of these funds. For example, the U.S. Fish and Wildlife Service issues "duck stamps" that hunters are required to purchase before they hunt migratory ducks. With a current price of $15, duck stamps generate revenues that are used to acquire and expand existing wildlife refuges. Since the creation of the duck stamp program, over $850 million has been raised to help fund the acquisition and operation of over 5 million acres of land.[13]

Taxes on hunting equipment also fund wildlife research and land acquisition. First enacted in 1937 and expanded with other related legislation, the Federal Aid in Wildlife Restoration Act, commonly called the Pittman-Robertson Act, imposes a tax upon the sale of various items used for hunting.[14] Hunting also provides support for the economy through equipment, travel, and other expenditures by hunters. Every five years, the U.S. Fish and Wildlife Service and the U.S.

---

[8] Final White-Tailed Deer Management Plan Environmental Impact Statement, National Park Service, December 2011.
[9] *Ibid*, p. 1-2.
[10] *Ibid*, p. 17.
[11] *Ibid*, p. 28.
[12] *Ibid*, p 65-72.
[13] Statistical information to 2003 available at www.fws.gov/duckstamps/federal/sales/sales.htm. More recent statistical information was provided to Committee staff in advance of this hearing.
[14] The legislation imposes a tax of up to 11% on firearms, ammunition, and archery equipment.

Census Bureau jointly conduct a study to analyze the economic impact of hunting and other outdoor activities.[15] In its most recent five-year study from 2001 to 2006, the study found that 12.5 million hunters spent over $22 billion on hunting related expenditures.[16] FWS states the financial and others impacts of hunting very clearly on its website. See Appendix A for the full statement. In one case study, the Wildlife Society measured the impact of a $1.4 million investment in elk relocation by hunters in 1996 in Kentucky in an attempt to restart an elk herd that had previously been eliminated. Within twelve years, Kentucky had a population of over 6,500 elk.[17]

Hunting's Economic Support for International Wildlife Conservation

The impact of hunting extends to overseas locations where poaching threatens the survival of many large game species. In 2004, CITES approved the establishment of an annual quota of five adult male black rhinoceros each from South Africa and Namibia.[18] CITES identified several reasons to support such hunting including a reduction in pressures for illegal hunting due to revenue generation, funding for upkeep of the remainder of the herd, and robust monitoring that would ensure that hunting levels were appropriate for the population.[19] This effort was supported by groups ranging from hunting organizations to the World Wildlife Fund. Efforts by one U.S. citizen to apply to the FWS for a permit to import one trophy from an approved hunt in Namibia were also supported by these groups. In its letter to the FWS supporting importation, the World Wildlife Fund highlighted the positive impact of hunting post-reproductive males rhinoceros on the rest of the population.[20]

Issues

Permits for hunts on U.S. private game ranches

Privately owned game ranches located in the U.S. and abroad allow hunting of specific species on their property for a price that typically depends upon the species and size of the animal that is hunted. Costs are typically less than $10,000 per animal although rarer and/or larger animals may cost in excess of $20,000 to hunt. Additional services may be included in this price such as a guide to accompany the hunter, required hunting licenses for the location where the hunt will take place, and transport in the game ranch.[21]

Several U.S. based game ranches contain U.S. bred scimitar-horned oryx, addax, and dama gazelle. Listed as an endangered species, the addax and gazelle are extremely rare in the wild while the oryx is extinct in the wild. U.S. private game ranches have created habitats for these animals and depend upon funds from a limited number of legal hunts to operate. Some of these game ranches have exported animals to re-establish herds overseas. However, FWS regulations

---

[15] National Survey of Fishing, Hunting, and Wildlife Associated Recreation (2006) located at http://www.census.gov/prod/www/abs/fishing.html.
[16] *Ibid*, p 4.
[17] "Conservation at a Crossroad", The Wildlife Professional, Spring 2009, p.28.
[18] CITES, Resolution Conf. 13.5 (rev. CoP14).
[19] *Ibid.*
[20] World Wildlife Fund submission to Federal Register Notice PRT229051, November 16, 2009 (Vol. 74, No. 219).
[21] Pricing examples can be found at www.blackcanyonbulls.net/Price_List.html, www.scenicviewhunting.com, www.thehighlonesomeranch.com/rates-reservations/big-game-hunting, and www.texashuntlodge.com/scimitar_horned_oryx_hunt_package.asp

require an individual permit for each hunt of these animals. Increasing the paperwork burdens of a legal hunter may reduce the incentive for private game ranchers to continue to grow the size of these herds. Without the income from these hunts, private game ranchers may not be able to continue to operate, and species populations may suffer as a result.

In 2005, the FWS issued a final rule concerning certain activities with captive U.S. bred scimitar-horned oryx, addax, and dama gazelle. At the time, research studies had found that only several hundred of the addax and dama gazelle each existed in the wild and that the scimitar oryx were extinct. The Federal Register notice that accompanied the final rule noted the positive impact of these private game ranches:

> Captive breeding in the United States has enhanced the propagation or survival of the scimitar-horned oryx, addax, and dama gazelle worldwide by rescuing these species from near extinction and providing the founder stock necessary for reintroduction. The scimitar-horned oryx is possibly extinct in the wild; therefore, but for captive breeding, the species might be extinct. Addax and dama gazelle occur in very low numbers in the wild, and a significant percentage of remaining specimens survive only in captivity (71% and 48%, respectively). Captive-breeding programs operated by zoos and private ranches have effectively increased the numbers of these animals while genetically managing their herds (Mallon and Kingswood 2001). Threats that have reduced these species' numbers to current levels in the wild continue throughout most of the historic range. As future opportunities arise for reintroduction in the antelope range countries, captive-breeding programs will be able to provide genetically diverse and otherwise suitable specimens.
>
> Some U.S. captive-breeding facilities allow sport hunting of surplus captive-bred animals. Sport hunting of surplus captive-bred animals generates revenue that supports these captive-breeding operations and may relieve hunting pressure on wild populations.

Subsequent to the issuance of this final rule, several groups filed suit in federal court alleging that the rule did not comport with the requirements of Endangered Species Act that each taking required a separate and unique permit to do so. District Court Judge Kennedy agreed with these groups, directing the FWS to revisit its prior regulations and impose hunt-specific permits.[22]

In 2011, the FWS issued new regulations to meet the requirements of the court but continued to find that:

> Captive-breeding programs have played a role in the conservation of the scimitar-horned oryx, addax, and dama gazelle, and we found that activities associated with captive breeding within the United States enhance the propagation or survival of the species by managing the species to ensure genetic integrity and diversity, serving as repositories for surplus animals, and facilitating the movement of specimens between breeding facilities. Some U.S. captive-breeding facilities allow sport hunting of surplus captive-bred animals, which generates

[22] *Friends of Animals, et al., v. Salazar, 626 F. Supp. 2d 102* (D.D.C. 2009)

revenue to support the operations and may relieve hunting pressure on wild populations.[23]

Trophy importation
Similar to the new rules for domestic endangered species identified above, each importation from a legal hunt of a CITES listed species must be individually approved by the FWS. Since the FWS uses a lengthy, full public comment period in the Federal Register, this creates a disincentive for hunters to spend their funds on these types of hunts where hunting is needed to fund conservation programs.[24] Hunters have urged FWS to speed up the permitting process to raise the financial value of these hunts for conservation efforts.

Witnesses

The Honorable Daniel Ashe
Director
U.S. Fish and Wildlife Service

Dr. Al Maki
Conservation Committee Chairman
Safari Club International

Dr. Stuart Pimm
Nicholas School of the Environment
Duke University

Mr. Nick Wiley
Executive Director
Florida Fish and Wildlife Conservation Commission

[23] 76 FR 39805
[24] See Federal Register Notice PRT229051, November 16, 2009 (Vol. 74, No. 219) for an example of such a process.

Appendix A

Official U.S. Fish and Wildlife Statement on the Impact of Hunting[25]

What do hunters do for conservation?

A lot. The sale of hunting licenses, tags, and stamps is the primary source of funding for most state wildlife conservation efforts.

By respecting seasons and limits, purchasing all required licenses, and paying federal excise taxes on hunting equipment and ammunition, individual hunters make a big contribution towards ensuring the future of many species of wildlife and habitat for the future. By paying the Federal excise tax on hunting equipment, hunters are contributing hundreds of millions of dollars for conservation programs that benefit many wildlife species, both hunted and non- hunted.

Each year, nearly $200 million in hunters' federal excise taxes are distributed to State agencies to support wildlife management programs, the purchase of lands open to hunters, and hunter education and safety classes. Proceeds from the Federal Duck Stamp, a required purchase for migratory waterfowl hunters, have purchased more than five million acres of habitat for the refuge system (2005 statistics only); lands that support waterfowl and many other wildlife species, and are usually open to hunting.

Local hunting clubs and national conservation organizations work to protect the future of wildlife by setting aside thousands of acres of habitat and speaking up for conservation in our national and state capitals.

[25] Original at www.fws.gov/hunting/whatdo.html.

Chairman BROUN. The Subcommittee on Investigations and Oversight will come to order. Good afternoon. I welcome everyone to today's hearing entitled, "The Science of How Hunting Assists Species Conservation and Management." You will find in front of you packages containing our witness panel's written testimony, their biographies, and truth in testimony disclosures.

I now recognize myself for five minutes for an opening statement.

As a hunter who was first introduced to the sport by my dad when I was six years old, I am personally aware of the positive impacts of managed hunting in America as well as overseas. I have been involved in hunting for about 60 years, and I am a life member #17 in the Safari Club International, the world's largest pro hunting conservation organization.

However, there may be some who are not aware of the positive impacts and how science of hunting assists species conservation and management. Today's hearing is part of my effort to ensure that legal hunting is properly recognized for its positive impacts on domestic as well as international animal populations, as well as conservation in general.

We have several witnesses that are testifying today who can speak firsthand of the positive impact of hunting and the science behind it. Represented today by its Director, Dan Ashe, the U.S. Fish and Wildlife Service has repeatedly highlighted the positive impacts of hunting.

Also testifying today is the Executive Director of the Florida Fish and Wildlife Conservation Commission, Nick Wiley. One of his responsibilities is management of legal harvest of American alligators, a species that was listed as endangered from 1967 to 1987. It only took 20 years for an incredibly successful managed harvesting program to end the endangered status of the American alligator. Similar efforts overseas are ongoing for other species as a representative from Safari Club International will testify today.

Legal hunts use scientific studies to determine the proper amount and type of hunting to be permitted for each species. In some cases, hunting may be used to address an overpopulation of one species that is harming other species or the environment as a whole due to overcrowding.

In an urban environment, like Washington, DC, the overpopulation of deer in places like Rock Creek Park is apparent to anyone who drives on the Rock Creek Parkway. The only real threat to these deer are automobiles. Less visible reminders are the lack of young shrub and tree growth due to the deer being desperate for food.

Hunting generates significant revenues through taxes on hunting equipment, duck stamps, and other hunting permits. The Duck Stamp Program alone is approaching $1 billion in total funds for conservation management, land acquisitions, and for research. This research includes extensive studies of animal populations, threats to their survival, and species survival rates. All of this research helps to ensure that society has a solid understanding of how best to manage its species to its highest sustainable level. Hunters also spend money throughout the economy, through airfare, lodging, and food. This means jobs for Americans.

However, I am disappointed that some in our society are opposed to any legal hunting, even in the face of its apparent widespread benefits. A recent *60 Minutes* story highlighted the positive benefits of American game ranches that have invested significant amount of resources of their own, not taxpayer dollars but of their own, to boost populations of the scimitar-horned Oryx, the addax, and the dama gazelle, all endangered species or extinct in their native habitats. These game ranchers rely on the hunting of a limited number of the older animals to fund their operations and investments in the growth of their stocks. Several of these ranches have even been able to export a portion of their stock to reintroduce them into the wild, using policies that rely upon these captive animals.

Yet as a result of litigation, hunters must now go through a needless paperwork process and jungle in order to spend their own money on a legal hunt.

Ultimately, chasing paperwork doesn't benefit anyone or any animal. In fact, paperwork delays and diverts needed funds away from the very species that need them. One person interviewed in the *60 Minutes* piece stated that she would rather see a species become extinct than see it hunted. This, unfortunately, in some groups is a too-pervasive policy or idea. If this doesn't highlight the irrationality of some of these people, I don't know what else does.

Our witnesses today understand the importance of hunting, and I look forward to hearing their testimony. I do have some concerns about how the U.S. Fish and Wildlife Service handles the permit applications for the importation of legal hunts and trophies. For example, paperwork delays related to the importation threaten the viability of a hunting plan for black rhinoceros that is backed by the Conservation on International Trade and Endangered Species, CITES, as well as groups such as the World Wildlife Fund.

I am also interested in learning what Director Ashe thinks of the requirement for individual taking permits for legal hunts of endangered species on American game ranches. Would it be better from a regulatory or wildlife conservation perspective if individual permits were replaced by an alternative system?

Finally, what can we do as a society to continue to build upon the tradition of hunters being the greatest advocate for species conservation and management? Their critical role in conserving and managing species cannot be ignored. Hunters, fishermen, farmers, and foresters are the Nation's true conservationists, and we need to support hunting for a reasonable and rationale conservation program.

[The prepared statement of Dr. Broun follows:]

PREPARED STATEMENT OF SUBCOMMITTEE CHAIRMAN PAUL C. BROUN

As a hunter who was first introduced to the sport by my father when I was six years old, I am personally aware of the positive impacts of managed hunts in America and overseas. I have been involved in hunting for almost 60 years and I am Life Member #17 in the Safari Club. However, there may be some who are not aware of these positive impacts and how the science of hunting assists species conservation and management. Today's hearing is part of my effort to ensure that legal hunting is properly recognized for its positive impacts upon domestic and international animal populations, as well as conservation in general.

We have several witnesses testifying today who can speak first hand of the positive impact of hunting and the science behind it. Represented today by its Director,

Dan Ashe, the U.S. Fish and Wildlife Service has repeatedly highlighted the positive impacts of hunting. Also testifying today is the Executive Director of the Florida Fish and Wildlife Conservation Commission, Nick Wiley. One of his responsibilities is management of legal harvest of American alligators, a species that was listed as endangered from 1967 to 1987. It only took 20 years for an incredibly successful mananged harvesting program to end the endangered status of the American alligator. Similar efforts overseas are ongoing for other species, as a representative from the Safari Club will testify.

Legal hunts use scientific studies to determine the proper amount and type of hunting to be permitted for each species. In some cases, hunting may be used to address an overpopulation of one species that is harming other species or the environment as a whole due to overcrowding. In an urban environment like Washington, DC, the overpopulation of deer in places like Rock Creek Park is apparent to anyone who drives on Rock Creek Parkway. The only real threat to these deer is automobiles. Less visible reminders are the lack of young shrub and tree growth due to deer desperate for food.

Hunting generates significant revenues through taxes on hunting equipment, duck stamps, and other hunting permits. The duck stamp program alone is approaching $1 billion in total funds for conservation management, land acquisitions, and research. This research includes extensive studies of animal populations, threats to their suvival, and species survival rates. All of this research helps ensure that society has a solid understanding of how best to manage a species to its highest sustainable level. Hunters also spend money throughout the economy through airfare, lodging, and food. This means jobs for Americans.

However, I am disappointed that some in our society are opposed to any legal hunting, even in the face of its apparent widespread benefits. A recent *60 Minutes* story highlighted the positive benefits of American game ranches that have invested significant resources of their own to boost populations of the scimitar-horned Oryx, the addax, and the dama gazelle—all endangered species or extinct in their native habitats. These game ranches rely on the hunting of a limited number of the older animals to fund their operations and investments in the growth of their stocks. Several of these ranches have even been able to export a portion of their stock to reintroduce them into the wild using policies that rely upon these captive animals. Yet as a result of litigation, hunters must now go through a needless paperwork process in order to spend their own money on a legal hunt.

Ultimately, chasing paperwork doesn't benefit anyone or any animal. In fact, paperwork delays divert needed funds away from the very species that need them. One person interviewed in the *60 Minutes* piece stated that she would rather see a species become extinct than see it hunted. If this doesn't highlight the irrationality of some, I don't know what does.

Our witnesses today understand the importance of hunting, and I look forward to hearing their testimony. I do have some concerns about how the U.S. Fish and Wildlife Service handles permit applications for the importation of legal hunts. For example, paperwork delays related to importations threaten the viability of a hunting plan for rhinoceros that is backed by the Convention on International Trade in Endangered Species as well as groups such as the World Wildlife Fund. I am also interested in learning what Director Ashe thinks of the requirement for individual taking permits for legal hunts of endangered species on Americn game ranches. Would it be better from a regulatory and wildlife conservation perspective if individual permits were replaced by an alternative system? Finally, what can we do as a society to continue to build upon the tradition of hunters being the greatest advocates for species conservation and management? Their critical role in conserving and managing species cannot be ignored.

Chairman BROUN. Now I yield to my good friend from New York, the Ranking Member, Mr. Tonko, for his opening statement.

Mr. TONKO. Thank you, Mr. Chair. We are here this afternoon to discuss an important and challenging goal; wildlife management. Our history, our rich history, is entwined with the image of the frontier. Early settlers were amazed at the wealth of resources they encountered here, first on the East Coast and then as they moved west. Resources appeared to be endless. Fish-filled rivers and lakes and bays, acres of forests filled with timber and an abundant wildlife of all sorts. Hunting, trapping, and fishing for sustenance, trade, and sport defined the lifestyle of many early Americans.

The wildlife management policies we have in place today were adopted as a result of some tragic losses of a number of species due to excesses in these practices. It turned out that our hunting, fishing, and trapping, coupled with habitat destruction exceeded animals' ability to reproduce. Populations collapsed, and a number of species were driven to extinction.

This was not only tragic for the lost species, but the loss of these populations deprived people of food sources and livelihoods. Today, we indeed know better. Science and experience have taught us that we need to balance our desire to hunt and fish and our need for land, water, timber, and mineral resources with the needs of the animals and plants that share this planet with us.

The Endangered Species Act, the Lacey Act, the Migratory Bird Treaty, our system of wildlife refuges and national parks, all of these play an essential role in maintaining that balance. There is no question that hunting, when matched with effective management and informed by solid biological advice, can play a role in sustaining some species. In the United States, we have competent agencies at both the federal and State levels and some of the best scientists in the world.

As a result, the United States has been a leader in demonstrating to the world how the hunting community can work with and be supported by public servants to successfully protect species in the wild.

Sadly, these conditions do not exist in large areas of the world. Many of the world's most desirable trophy species reside in lands that lack effective governance and a wealthy domestic hunting population. These countries do not have a sufficiently robust domestic biological science infrastructure to guide what would be sound management.

In addition, cultural traditions that establish the use of body parts for their perceived medicinal effects or place high value on artifacts crafted from animals fuel strong concentives to overexploit populations. In these places the role of hunting, which may take the form of poaching, may be destructive rather than constructive. It takes solid science and a partnership between effective government and the hunting, fishing, and outdoor recreation communities to maintain the wild areas of this country and the wild animals that inhabit them.

The Endangered Species Act is an important statutory structure to guide management decisions for those species that are attractive to hunters. There is no evidence that the ESA is failing in its purposes. Even when faced with something as unusual as hunting ranches that exist off an African hunting experience in the wilds of New Mexico or Texas, the law is flexible enough to work. I know there have been some complaints that the FWS in the face of a court decision should not require licenses of facilities that offer hunts of the scimitar-horned Oryx, the addax, or the dama gazelle.

However, the cost of getting the captive-bred wildlife permit and the annual taking license work out to just $140 a year over a five-year period. If a ranch is charging thousands of dollars to hunt just one of these animals, and they are, a fee of less than $150 a year to be in that business does not seem overly burdensome. It seems to me that the Fish and Wildlife Service has been doing a good job.

State agencies, so far as I am aware, have also been doing a good job in species management. The scientific community has rallied to support management efforts and guide species recovery plans, and the members of the hunting community on balance have been responsible stewards of America's wildlife.

Let me close by offering my personal view that the duck stamp fee should be increased. I know that Director Ashe will speak to this, but the fee has not gone up in over 20 years. This stamp is widely supported in the hunting and recreation community and provides dedicated funds to support these activities. The terminology, dedicated fund, is something that we need to pay strict attention to, and to raise it to $25 after being at $15 for a generation seems like a reasonable step, if, in fact, the dedication of those fees is truly that, to provide FWS with the resources dedicated to protect the wetlands that our wild fowl need for forage and breeding.

We were granted an amazing biological inheritance with the foresight of dedication of leaders like Teddy Roosevelt, John F. Lacey, and Aldo Leopold. They realized that to maintain some of our pioneer spirit, our sense of wild, open spaces, and connection to this land we needed to protect and revere the living resources we share it with. The Wildlife and Land Management laws that guide Federal and State Government policy ensure that we act as good stewards of this inheritance so that it will be passed along to generations to come.

I thank our witnesses for appearing before the Subcommittee this afternoon. I thank you, Mr. Chair, and would highlight that I am including a letter from the Humane Society with my given statement as part of this proceeding.

Thank you, and I yield back.

[The prepared statement of Mr. Tonko follows:]

PREPARED STATEMENT OF SUBCOMMITTEE RANKING MEMBER PAUL D. TONKO

Thank you, Mr. Chairman.

We are here this afternoon to discuss an important and challenging goal—wildlife management. Our history is entwined with the image of the frontier. Early settlers were amazed at the wealth of resources they encountered here. First on the East Coast and then as they moved west, resources appeared to be endless—fish-filled rivers, lakes and bays; acres of forests filled with timber; abundant wildlife of all sorts. Hunting, trapping, and fishing for susistence, trade, and sport defined the lifestyle of many early Americans.

The wildlife management policies we have in place today were adopted as a result of some tragic losses of a number of species due to excesses in these practices. It turned out that our rate of hunting, fishing, and trapping, coupled with habitat destruction, exceeded animals' ability to reproduce. Populations collapsed and a number of species were driven to extinction. This was not only tragic for the lost species. The loss of these populations deprived people of food sources and livelihoods. Today, we know better.

Science and experience have taught us that we need to balance our desire to hunt and fish and our need for land, water, timber, and mineral resources with the needs of the animals and plants that share this planet with us. The *Endangered Species Act*, the *Lacey Act*, the Migratory Bird Treaty, our system of wildlife refuges and national parks—all of these—play an essential role in maintaining that balance.

There is no question that hunting, when matched with effective management and informed by solid biological advice, can play a role in sustaining some species. In the United States, we have competent agencies at the federal and State levels, and some of the best scientists in the world. As a result, the United States has been a leader in demonstrating to the world how the hunting community can work with, and be supported by, public servants to successfully protect species in the wild.

Sadly, these conditions do not exist in large areas of the world. Many of the world's most desirable trophy species reside in lands that lack effective governance and a wealthy domestic hunting population. These countries do not have a sufficiently robust domestic biological science infrastructure to guide sound management. In addition, cultural traditions that established the use of body parts for their perceived medicinal effects or placed high value on artifacts crafted from animals fuel strong incentives to overexploit populations. In these places, the role of hunting—which may take the form of poaching—may be destructive rather than constructive.

It takes solid science and a partnership between effective government and the hunting, fishing, and outdoor recreation communities to maintain the wild areas of this country and the wild animals that inhabit them. The *Endangered Species Act* is an important statutory structure to guide management decisions for those species that are attractive to hunters. There is no evidence that the ESA is failing in its purposes. Even when faced with something as unusual as hunting ranches that exist to offer an African hunting experience in the wilds of New Mexico or Texas, the law is flexible enough to work.

I know there have been some complaints that the FWS, in the face of a court decision, should not require licenses of facilities that offer hunts of the Scimitar-horned Oryx, the adax, or the dama gazelle. However, the costs of getting the Captive-bred Wildlife permit and the annual taking license work out to just $140 a year over a five-year period. If a ranch is charging thousands of dollars to hunt just one of these animals—and they are—a fee of less than $150 a year to be in that business does not seem overly burdensome.

It seems to me that the Fish and Wildlife Service has been doing a good job. State agencies, so far as I am aware, have also been doing a good job in species management. The scientific community has rallied to support management efforts and guide species recovery plans. And the members of the hunting community, on balance, have been responsible stewards of America's wildlife.

Let me close by offering my personal view that the Duck Stamp fee should be increased. I know that Director Ashe will speak to this, but the fee has not gone up in over 20 years. The stamp is widely supported in the hunting and recreation community and provides dedicated funds to support these activities. And to raise it to $25 after being at $15 for a generation seems like a reasonable step to provide FWS with resources dedicated to protect the wetlands that our wildfowl need for forage and breeding.

We were granted an amazing biological inheritance through the foresight and dedication of leaders like Teddy Roosevelt, John F. Lacey, and Aldo Leopold. They realized that to maintain some of our pioneer spirit, our sense of wild open spaces and connection to this land, we needed to protect and revere the living resources we share it with. The wildlife and land management laws that guide Federal and State Government policy ensure that we act as good stewards of this inheritance so that it will be passed along tho the next generation.

I thank our witnesses for appearing before the Subcommittee this afternoon. Thank you, Mr. Chairman.

Chairman BROUN. Thank you, Mr. Tonko. If there are Members who wish to submit additional opening statements, your statements will be added to the record at this point.

I would like to make one statement. I don't think there is a hunter in this Nation that believes that poaching is hunting. It is lawlessness, and it should be prosecuted to the greatest degree, whether it is in this country or other way. So please don't confuse hunting and poaching because you are talking about two different things. I don't think you are a hunter, are you, Mr. Tonko?

Mr. TONKO. I am not.

Chairman BROUN. Okay. Well, we in the hunting community do not equate hunting and poaching because they are two totally different things.

Mr. TONKO. And I am not a poacher, though.

Chairman BROUN. Okay. Well, that is right.

Mr. TONKO. So here we are.

Chairman BROUN. I think poachers ought to be put in jail.

Okay. At this time I would like to introduce our witnesses. The first is the Honorable Daniel Ashe, the Director of the U.S. Fish and Wildlife Service, Dr. Al Maki, the Chairman of the Conservation Committee of Safari Club International, Dr. Stuart Pimm, a Professor in the Nicholas School of Environment at Duke University, and Mr. Nick Wiley, the Executive Director of the Florida Fish and Wildlife Conservation Commission. I welcome all of you all here today.

As our witnesses should know, spoken testimony is limited to five minutes each, after which Members of the Committee will have five minutes each to ask their questions. Your written testimony will be included in the record of this hearing.

It is the practice of the Subcommittee on Investigations and Oversight to receive testimony under oath. Do any of you have an objection to taking an oath? Please shake your head one side or another, say no, or something. Let me know what you are—okay.

Let the record reflect that all the witnesses shook their head from side to side indicating that they have no objection to taking an oath, and so let the record reflect that fact.

Now, you also may be represented by counsel. Do any of you have counsel here today? Again, please give me an indication so I can——

Okay. Dr. Maki has counsel from Safari Club. Anybody else? Okay. Nobody? Please, Dr. Pimm, I don't see your head moving one way or the other. Okay. The other three—let the record reflect—sir? Okay. Very good. Okay. I just missed that.

We will let the record reflect that Dr. Maki has counsel and the other three do not.

And if all of you would stand, raise your right hand. Do you solemnly swear or affirm to tell the whole truth and nothing but the truth, so help you God?

Thank you. You may be seated. Let the record reflect that all of our witnesses have taken the oath.

Now I would like to recognize our first witness, Director Ashe. You have five minutes, sir. If you could, please, keep it to five minutes, though the Ranking Member and I took a little bit of time over, we always give each other a little bit of leeway with that. We would like for you all to please try to stay within your five minutes if you can. Director Ashe.

STATEMENT OF HON. DANIEL ASHE, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE

Mr. ASHE. Thank you, Chairman Broun and Ranking Member Tonko and other Members of the Subcommittee. It is a great opportunity to testify today on the role of hunting in conservation and management of wildlife resources. I, too, have to admit a bias on this subject. I am a lifelong hunter, a shooter, and an angler. I grew up in Georgia, hunting squirrels, quail, dove, rabbits, although I have dabbled a little bit with big game and turkey. My real passion has been bird hunting, particularly waterfowl. Some of my most treasured memories involve early mornings afield, and we talk much these days about the importance of connections to the

outdoors, and successful hunting demands a connection to the outdoors.

Certainly understanding the quarry is a basic prerequisite, but one has to also understand the consequence of weather and adeptly adjust to the curveballs and changeups that Mother Nature throws at you. There are certainly other recreational pursuits that instill similarly deep connections to the outdoors, but few, if any, produce the legacy of commitment and the sense of stewardship that hunting does.

Can hunting serve a positive role in wildlife management? Absolutely it does, and the examples abound, particularly, Mr. Chairman, as you mentioned in the control and management of overabundant populations like we have with deer in Rock Creek Park.

But the overwhelming contribution of hunting to conservation is really the sense of personal responsibility that it engenders. Hunters become conservationists. They become members, volunteers, and leaders in great organizations like Ducks Unlimited, Wild Turkey Federation, Boone and Crockett Club, Safari Club International, and many, many others. And they ensure that their donated time and resources go to on-the-ground conservation. Hunters were among the original conservationists, and today the Nation's sportsmen and women through their passion for the outdoors and their commitment to ensuring a future for fish and wildlife populations are the foundation of our current commitments to protecting and sustainably managing these resources for all Americans to enjoy.

For more than a century, hunters and anglers have worked tirelessly to ensure an abundance of game and the enforcement of wildlife laws to protect wildlife populations. They consistently supported funding these efforts through license fees and excise taxes on the equipment that they take and use in the field. The sporting community continues to dedicate their time, wisdom, and energy to conservation working side by side with a diversity of stakeholders.

My written statement discusses the historic role of hunters and anglers and wildlife conservation and management and the great accomplishments we have made together over the past century. I am proud of the U.S. Fish and Wildlife Service's legacy in this regard and our contributions to providing hunting and angling opportunities to Americans.

The Federal Duck Stamp, and the National Wildlife Refuge System, the North American Waterfowl Management Plan, the Wildlife and Sport Fish Restoration Program, and other service-led programs are key contributors to providing Americans with quality hunting opportunities based on healthy wildlife populations. Our relationship with our State counterparts is a model of American federalism, and I am proud to be here today with a good friend and colleague, Nick Wiley, from Florida.

If we are going to conserve this great legacy we need an engaged and active Congress, and I appreciate your leadership in holding this hearing today. We need a reauthorized Farm Bill with the strongest possible conservation title. We need a price increase for the Federal Duck Stamp, which every major waterfowl conservation organization is supporting. We need reauthorization of key statutes like the *North American Wetlands Conservation Act* and

funding levels that will support robust habitat conservation. We need stronger science capacity within resource agencies like the U.S. Fish and Wildlife Service, and as your hearing title correctly indicates, a core strength of wildlife management and hunting as a component of wildlife management is its basis in science. Investing in this capacity is an investment in the future of hunting, and beyond game in the bag and rich memories of days afield, these investments pay large dividends for the American economy.

Our 2006 National Survey of hunting and fishing identified that hunters and anglers spent $120 billion pursuing their passion, an amount equal to what Americans spend on all spectator sports, casinos, motion pictures, golf courses, country clubs, amusement parks, and arcades combined. The tradition of hunting is interwoven in the fabric of conservation in America. If we have a strong hunting tradition, we will have strong support for conservation.

Mr. Chairman, my deepest gratitude to you for holding this hearing. I look forward to and anticipate your questions. Thank you.

[The prepared statement of Mr. Ashe follows:]

TESTIMONY OF DAN ASHE, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR, BEFORE THE HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY, SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT, ON "THE SCIENCE OF HOW HUNTING ASSISTS SPECIES CONSERVATION AND MANAGEMENT"

June 19, 2012

Good afternoon Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee. I am Dan Ashe, Director of the U.S. Fish and Wildlife Service (Service), within the Department of the Interior (Department). Thank you for the opportunity to appear before the Subcommittee today to testify on how hunting and fishing contributes to the conservation and management of fish and wildlife resources in the United States.

The nation's sportsmen and women, their passion for the outdoors, and their commitment to ensuring a future for fish and wildlife populations are the foundation of our current commitments to protecting and sustainably managing these resources for all Americans to enjoy. For more than a century, hunters and anglers have worked tirelessly to ensure an abundance of game and the enforcement of wildlife laws to protect wildlife populations, and they have consistently supported funding these efforts through license and user fees on the equipment used in the field. The sporting community continues to dedicate their time, wisdom, and energy to conservation, working side-by-side with a diversity of stakeholders even as the challenges facing fish and wildlife, and their habitat, continue to grow.

In addition to supporting the conservation of natural resources, America's hunting and angling tradition is a vital part of the nation's economy. The 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that in 2006, hunters and anglers spent $120 billion pursuing their passion. This is an amount equal to Americans' spending on all spectator sports, casinos, motion pictures, golf courses, country clubs, amusement parks, and arcades combined. It is roughly equivalent to one out of every one hundred dollars of goods and services produced in our economy.

My testimony today will discuss the historic role of hunters and anglers in wildlife conservation and management, what has been accomplished, the Service's role, and our recommendations on what needs to be done going forward to ensure we can provide opportunities to the next generation of sportsmen and women.

Hunters and the North American Model of Wildlife Conservation

The notion of wildlife as a public resource formed the cornerstone of what is now known as the North American Model of Wildlife Conservation—a system that keeps wildlife as a public and sustainable resource, scientifically managed by professionals and agencies such as the Service and our state counterparts. The guiding principles of the North American Model are simple: the nation's fish and wildlife resources belong to all Americans and they must be managed

sustainably, so that current and future generations can enjoy their abundance. Hunters and anglers are a backbone of the model's success.

It is appropriate at this hearing to provide a brief overview of the legislative trail blazed by hunters and anglers that led to the North American Model.

Fish and wildlife resource management is strongly vested in the states, and the Service works in close partnership with state fish and wildlife agencies to manage wildlife populations, implement federal statutes and administer federal lands.

The North American Model was built upon conservation efforts led by Theodore Roosevelt and contemporary hunters and anglers. After the near decimation of once common species, like bison, wood duck, and wild turkeys, and the dramatic scale of killing birds for food and feathers, they recognized the excesses of commercial hunting and the need to manage the taking of wild animals within limits that ensure the sustainability of wildlife populations. Through President Roosevelt's leadership, the first National Wildlife Refuges were created to provide sanctuary for migratory birds and other wildlife.

As state fish and wildlife agencies, or "commissions," formed across the nation to take actions that would conserve wildlife populations and enforce hunting limits, they were challenged with limited funding to carry out their work. By1929, Aldo Leopold and other conservation visionaries, political leaders, and state fish and wildlife administrators were crafting a policy for wildlife conservation across the nation. With the support of sportsmen, two innovative statutory mechanisms were created to dedicate sportsmen's dollars toward conservation.

In 1934, in the midst of the Great Depression and Dust Bowl, the Migratory Bird Conservation and Hunting Stamp, or the Federal Duck Stamp, was enacted and required all waterfowl hunters to carry this stamp when hunting waterfowl, again with leadership and strong support from America's waterfowl hunters. This program is one of the world's most innovative wetland conservation programs. Today, hunters continue this long tradition of willingly paying this fee in the name of conservation, and ninety-eight cents of every dollar go directly into a special fund to buy and conserve wetland habitat that is managed as part of the National Wildlife Refuge System. To date, Federal Duck Stamp sales have generated more than $850 million used to purchase and protect more than 5.3 million acres of waterfowl habitat for ducks, geese, other migratory birds and many other wetland dependent species of fish, wildlife and plants.

In 1937, sportsmen and conservation visionaries in Congress and among America's hunters and anglers all came together to achieve the enactment of the Pittman-Robertson Wildlife Restoration Act. This law enables state hunting license dollars to be combined with funds from a user fee on sport firearms and ammunition to fund state wildlife programs. The success of this model served as a foundation for the 1950 enactment of the Dingell-Johnson Sport Fish Restoration Act of 1950, which established a user fee for certain fishing equipment, generating more revenues for states to manage recreational fish resources. The Wallop-Breaux amendments of 1984 took another step by establishing a tax on other boating related equipment. Again, hunters and anglers have taken the lead to promote a use-pay system, willingly paying fees to sustain wildlife populations.

Since the establishment of the Wildlife and Sport Fish Restoration Programs, hunters and anglers have paid more than $11 billion in user fees on purchases of firearms, ammunition, archery, fishing and boating equipment. Those funds have in turn been used by state wildlife agencies to maintain and restore fish and wildlife resources, educate hunters and fund sport shooting ranges nationwide. This year alone, more than $700 million will be distributed to 56 state and territorial wildlife agencies through the Federal Aid in Wildlife and Sport Fish Restoration programs to fund conservation efforts, shooting ranges and hunter education.

With these funds, the states have developed science-based wildlife management capacity. Lands acquired with Federal Assistance funds or state hunting and fishing license revenue are some of the most valuable assets owned by state fish and wildlife agencies. They are not only an economic asset, but they also provide important fish and wildlife habitat and outdoor recreational opportunities that help connect people with nature—another one of the Service's top priorities.

The U.S. Fish and Wildlife Service's Role in Providing Hunting Opportunities

The Service provides hunting opportunities for the public in a number of ways, including through the programs outlined below:

Management of Migratory Bird Hunting

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 to implement international treaties to protect and conserve bird species that migrate between the U.S. and other nations. Today, the Act implements four such treaties between the U.S. and Canada, Mexico, Japan, and Russia. Among bird species protected through these treaties are migratory game birds, such as waterfowl, including ducks, geese, and swans; doves; cranes; and woodcock. The MBTA prohibits the "take" of protected bird species without a permit, and provides for the hunting of certain game species. The Service conserves bird species protected by the MBTA through the administration and establishment of annual hunting season and bag limit frameworks for these migratory game bird species.

Migratory birds are cooperatively managed by the Service, the State, and Canadian Provincial wildlife agencies through four administrative migratory bird "flyways": the Atlantic; Mississippi; Central; and Pacific Flyways. Each Flyway has a Council, consisting of representatives from state and provincial agencies. Since 1948, hunting seasons and bag limit frameworks are created each year through the partnership of the Service and the four Flyway Councils. The Councils are advised by Flyway technical committees consisting of state and provincial biologists who evaluate species and population status, harvest, and hunter-participation data and make recommendations to the Service. The Service then considers these recommendations and establishes the annual hunting frameworks from which States choose their individual hunting seasons.

Federal Duck Stamp

The Federal Migratory Bird Hunting and Conservation Stamp, commonly known as the Federal Duck Stamp, plays a critical role in this conservation partnership and its success story. Originally created in 1934, the Duck Stamp represents the permit required by the Migratory Bird Treaty Act of 1918 to hunt waterfowl, and every waterfowl hunter is required to possess one while afield. Ninety-eight percent of the receipts from stamp sales are used to acquire important migratory bird breeding, migration, and wintering habitat in fee title and through conservation easements, which are added to the National Wildlife Refuge System. Since 1934, sales of the Duck Stamp have helped to protect nearly 5.3 million acres of waterfowl habitat for the National Wildlife Refuge System. These protected lands not only benefit waterfowl, but also countless other wildlife species, as well as opportunities for hunting, fishing and other wildlife-dependent recreation.

National Wildlife Refuge System

The Service administers the National Wildlife Refuge System, which contains 556 refuges and 38 wetland management districts found in every state and territory in the nation. The National Wildlife Refuge System Improvement Act, enacted in 1997, was the first legislation to state explicitly that compatible wildlife-dependent recreation (hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation) should not only receive priority consideration in refuge planning and management, but that it is "directly related to the mission of the National Wildlife Refuge System." This organic act for the Refuge System was supported by a broad coalition of hunting groups and environmental organizations, and received overwhelming bipartisan support in the Congress.

The Refuge System hosted 45.7 million visitors in 2011. These members of the public come to their refuges to fish, hunt, hike, or just be outdoors. In a world that is becoming more urbanized, national wildlife refuges are more valuable than ever as places where fish, wildlife—and people—can thrive.

The Refuge System provides some of the most outstanding hunting opportunities in the country; opportunities available to every American with the ability and desire to get outside and hunt. Most refuge hunting programs complement and are coordinated with hunting programs administered by states. There are 327 refuges with hunting programs and 271 with fishing programs. There were nearly 10 million hunting and fishing visits to refuges in 2011. The Service is committed to strengthening and expanding hunting and fishing opportunities wherever those activities are compatible with the primary mission of the refuges on which they would occur

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (Plan or NAWMP) is a tripartite agreement among the U.S., Canada, and Mexico. Established in 1986 by the U.S. and Canada, the Plan was developed to address an alarming decline in waterfowl populations through the 1970's and early 1980's. Highly valued by hunters, waterfowl are integral to the natural history and hunting tradition in the nation, and their presence in large numbers during hunting seasons provides key economic support to many communities.

Historical data indicate that about 53 percent of U.S. wetlands had been destroyed since early settlement, while a significant percentage of wetlands in Canada have been destroyed or degraded since settlement. Wetlands that support much of the nesting habitat for North American waterfowl are found in Canada and in the U.S. Prairie Pothole Region, and losses to these wetland habitats have a profound impact on the sustainability of waterfowl populations.

In 1994, the Plan was updated, adding Mexico as a signatory. On May 31st, 2012, Secretary Salazar signed a revision to the Plan that has three overarching goals for waterfowl conservation: (1) abundant and resilient waterfowl populations to support hunting and other uses without imperiling habitat; (2) wetlands and related habitats sufficient to sustain waterfowl populations at desired levels, while providing places to recreate and ecological services that benefit society; and (3) growing numbers of waterfowl hunters, other conservationists and citizens who enjoy and actively support waterfowl and wetlands conservation.

North American Wetlands Conservation Act

The North American Wetlands Conservation Act (NAWCA) was enacted in 1989 to implement NAWMP by supporting partnership efforts to protect and restore habitats for migratory birds like waterfowl that depend on wetland habitats. Through NAWCA, matching grants are provided to private organizations, agencies, and individuals to carry out wetlands conservation projects in the U.S., Canada, and Mexico. Since its inception, this program has been among the most successful leveraged funding mechanisms for the conservation of wetland habitats that benefit waterfowl and other birds, as well as other wildlife species. NAWCA-supported wetland conservation projects help to ensure that the waterfowl populations enjoyed throughout the U.S. are supported with sufficient nesting, wintering, and migration habitats.

The past 22 years have witnessed remarkable achievements in conservation through this landmark legislation. Partnerships applying NAWCA funds to wetland conservation projects include nationally recognized conservation organizations, State fish and wildlife agencies, local governments, grass-roots organizations, and private landowners. They have supported thousands of cooperative projects across North America, leveraging billions of partner dollars and affecting more than 27 million acres of bird habitats.

NAWCA projects provide wetland habitat where it is needed across the country and the continent, including in the northern breeding grounds, along widespread migration routes, and in southern areas where some species spend the winter months. For example, in the critical waterfowl breeding grounds of the prairie pothole region in the north-central U.S., a portion of NAWCA funding has conserved more than 2.2 million acres of wetland and associated grasslands by leveraging $113 million in Federal funds to generate another $180 million in partner contributions since the start of the program in 1991.

Wildlife and Sport Fish Restoration Program

The Wildlife and Sport Fish Restoration Program (WSFR), which is celebrating its 75th year, is one of the most significant and successful partnership approaches to fish and wildlife

conservation in U.S. history. As previously described, the programs known as Pittman-Robertson and Dingell-Johnson raise funds through user fees on hunting and fishing equipment. The funds are administered by the Service and allocated to each state to support fish and wildlife conservation and hunting and fishing programs. Since its inception, WSFR has provided $14 billion for fish and wildlife conservation, supplied jobs for many Americans, and benefitted local economies through boating, fishing, hunting and shooting activities.

Looking Forward

Although the states and the Service, buoyed by the support and engagement of the sport hunting and fishing public, have accomplished so much over the past century, there is still much more work to be done. For example, agricultural policies and prices have led to more land being taken out of conservation status in the Prairie Pothole Region – an area critical for nesting waterfowl. Fish and wildlife populations are facing great challenges presented by habitat loss and changes in the climate. To help species adapt, and to ensure long term hunting opportunities, wildlife managers and scientists must work together at delivering conservation at a landscape scale. To achieve this, we, and our partners, support increasing the price of the Federal Duck Stamp and reauthorizing the North American Wetlands Conservation Act. Finally, we need to recruit the next generation of hunters to continue the conservation tradition of the past century.

Duck Stamp Price Increase

Through both the current and past Administrations, annual budget requests have included an update to the price of the Federal Duck Stamp. The price of the Federal Duck Stamp is statutorily set through the Migratory Bird Hunting and Conservation Stamp Act. It has remained at its current price of $15 since 1991.

Price increases of crops and other factors have expanded conversion of native prairie to farm lands, while a warming climate is evaporating prairie "pothole" wetlands. Land prices in prime waterfowl nesting habitat have increased as well, reducing the buying power of funds raised through Federal Duck Stamp sales.

Based on the Consumer Price Index, the stamp would need to cost more than $24 today to have the same buying power that $15 had in 1991. As an example, in 1991, revenue from the Duck Stamp enabled the Service to acquire 89,000 acres of habitat for the Refuge System at an average cost of $306 an acre. In 2010, the Service was able to acquire significantly less habitat because land values had tripled to an average of $1,091 an acre.

Consistent with the Administration's FY2013 budget request, bipartisan legislation in the Senate (S. 2156) would require the Secretary of the Interior to establish a price for the Federal Duck Stamp every 5 years, in consultation with the Migratory Bird Conservation Commission, beginning with calendar year 2013, and the Service testified this year in support of this proposal.

Reauthorization of the North American Wetlands Conservation Act

In 2006, Congress reauthorized appropriations for NAWCA through fiscal year 2012, reflecting the continued support of Congress and the public support for NAWCA's goals. Bipartisan legislation has been introduced in both the House and the Senate (H.R. 1960 and S. 2282) to extend its authorization, at current funding levels, through FY 2017. We support this bill and look forward to continuing to administer this outstanding program to build on its impressive legacy of accomplishment for both the American people and the wildlife it treasures.

Building Science Capacity

The Service has made the building of science capacity a priority, establishing an Office of the Science Advisor to the Director (OSA). This was done in part to strengthen the Service's tradition of scientific excellence in the conservation of fish, wildlife, plants and their habitat. The priorities for the OSA are: (1) to continue to build a foundation for scientific integrity in the Service's utilization and development of scientific data and products and implementing the Department of Interior's Scientific Integrity Policy; (2) to continue to provide a scientific foundation for the Service to address the impacts of climate change on fish and wildlife populations; (3) to coordinate the Service's commitment to the establishment, implementation, and participation in Landscape Conservation Cooperatives (LCCs); and (4) to continue to provide science support for the Service's programs, including access to the best available information via our library system, and making sure our scientists and biologists have the science tools to do their jobs. While science excellence has always been a hallmark of the Service's work, the OSA provides both guidance and resources for our scientists and managers to ensure the quality of fish and wildlife management and conservation efforts, including the management of migratory game birds and the technical assistance we provide for fish and wildlife conservation to state fish and wildlife agencies. Through the Science Support Partnership (SSP) Program, the U.S. Geological Survey partners with the Service to understand and provide the critical science information required to effectively manage our nation's resources. Through this partnership, the USGS has undertaken 350 projects in support of FWS local, regional, and national programs.

The Service's focus on landscape-level conservation, supported through the LCCs, the Joint Ventures Program, and the National Fish Habitat Program, applies modern, science-based conservation principles for the strategic identification of priority conservation work that is needed across landscapes that support game and other fish and wildlife species. For all species, actions taken on lands both in and around their habitats will affect their long-term survival. This has clearly been the case for migratory birds, and wildlife scientists are finding it to be true of more stationary species, as well. The Service's science capacity and support serves hunters and sport fishermen, as well, by helping to ensure that conservation measures we take to conserve game species are supported, monitored, evaluated, and adjusted by strong science.

Recruiting the Next Generation of Hunters, Anglers and Conservationists

Our society has undergone major changes – moving from rural to suburban/urban life, and playing with technological devices rather than going outdoors. We need to get kids outside to be physically fit, mentally healthy, and to understand and enjoy the outdoors. More specifically, we need to recruit new hunters and anglers. The steps outlined above and others are not possible

without the continued support of sportsmen and women, now and in the future. We need to recruit new hunters and anglers and enlist their support in our conservation mission.

According to the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation and information from previous surveys, the number of hunters 16 and older declined by 10 percent between 1996 and 2006. The number of anglers dropped 15 percent. Recruitment rates of youngsters in hunting and fishing have stabilized after declining through the 1990s. According to data from the 2006 survey, 42 percent of our nation's youth have gone fishing and 8 percent have gone hunting at least once.

We need to continue building the ranks of hunters, anglers and other folks who enjoy wildlife-dependent recreation. Their support is critical for fish and wildlife and, as the National Survey demonstrates, it's also good for the economies of local communities. In 2006, more than 87 million Americans, or 38 percent of the United States' population age 16 and older hunted, fished or observed wildlife. As previously noted, they spent $120 billion that year pursuing those activities – an amount equal to Americans' spending on all spectator sports, casinos, motion pictures, golf courses, country clubs, amusement parks and arcades combined. This is roughly equivalent to one out of every one hundred dollars of goods and services produced in our economy.

For fishing, 30 million Americans or 13 percent of the U.S. population fished and spent a total of $41 billion. There was a 15 percent decline in fishing participation during the last decade and a 16 percent decrease in spending.

For hunting, 12.5 million Americans or 5 percent of the U.S. population hunted and spent a total of $23 billion. There was a 10 percent decline in participation from 1996 to 2006 and a 14 percent decrease in spending.

We are concerned with the impact declining number of hunters, anglers, and outdoor enthusiasts will have on the ability of states, in particular, to retain the capacity to manage and conserve their fish and wildlife resources. This is why the Service places a high priority on connecting kids with nature. The Service supports the states in their efforts to recruit new hunters and anglers through youth fishing programs and hunter education, mentoring, and safety programs.

Conclusion

Today, millions of Americans deepen their appreciation and understanding of the land and its wildlife through outdoor experiences. Hunting and angling organizations contribute millions of dollars and countless hours of labor to various conservation causes each year. The Service values hunters and anglers, acknowledges their critical role in conserving the natural wonders of the country for all Americans.

Mr. Chairman, thank you for holding this hearing, and for the opportunity to testify. I will be happy to answer any questions you might have.

Chairman BROUN. Thank you, Director. I appreciate your testimony.

Now I recognize our second witness today, Dr. Maki. You have five minutes, sir.

STATEMENT OF DR. AL MAKI, CHAIRMAN, CONSERVATION COMMITTEE, SAFARI CLUB INTERNATIONAL

Dr. MAKI. Mr. Chairman and Members of the Committee, thank you for the invitation to testify here today. My name is Dr. Al Maki, and I appear before you as a member of the Executive Committee of Safari Club International and Chairman of the SCI Conservation Committee, and lastly as a representative of America's 15 million hunters.

SCI is a non-profit organization with approximately 52,000 members worldwide. SCI's missions are the conservation of wildlife, protection of the hunter, and education of the public concerning hunting and its use as a conservation tool. I am a wildlife biologist by trade and a hunter and conservationist by trade. I applaud this Committee's decision to hold a hearing on a much maligned and often misunderstood topic, the essential role that hunting plays in the conservation of wildlife, both domestically and internationally.

As key examples, my Safari Club International Conservation Committee currently stewards over 60 individual conservation projects all over the world. In the last five months we have contributed over $240,000 to conservation research alone. Also, since 1937, the *Pittman-Robertson Act* has resulted in over $2 billion of funds going directly into budgets for research and conservation-related programs, which has allowed several game species such as white-tailed deer, elk, antelope, bison, turkeys, and many others to expand beyond ranges beyond where they are found prior to the implementation of this act, which is fully funded by American sportsmen.

This North American model of hunter-based conservation is indisputably the most successful model, promoting wildlife conservation worldwide bar none. The roots of this model involve such names as Teddy Roosevelt, Aldo Leopold, George Grinnell, who collectively established the framework we have seen work so successfully time and again. Over 100 years ago, Roosevelt wrote, and I quote, "In a civilized and cultivated country wild animals only continue to exist at all when preserved by sportsmen. The excellent people to protest against all hunting and consider sportsmen as enemies of wildlife are ignorant of the fact that in reality the genuine sportsman is by all odds the most important factor in keeping the larger and more valuable wild creatures from total extermination."

Since then, the hunting community has taken those words to heart and followed through with action. Unfortunately, our own U.S. Fish and Wildlife Service understands the role of hunters in conservation but often refuses to embrace it. Again and again, the Fish and Wildlife Service has ignored the role of the American hunter and instead has chosen to employ the *Endangered Species Act* to prevent or inhibit the use of hunting as a conservation tool rather than to encourage it. The saga of the three antelope species

as related by our Chairman earlier this afternoon is a key example. Despite the successes by the private ranching of these animals, the anti-hunting community refused to acknowledge the role that hunting was playing in these species' recovery and threatened to sue the Fish and Wildlife Service if it didn't list the three species as endangered based on their plight in Africa.

Despite the arguments offered by SCI and other groups against the inclusion of the captive populations, the Fish and Wildlife listed both native and U.S. populations as endangered. As a consequence, the value and numbers of these animals has dropped substantially due to uncertain and owners' paperwork, ranchers can no longer be certain that the ownership of these animals will pay for itself. The simple truth is that by listing these species as endangered, Fish and Wildlife Service has undermined rather than benefited the conservation of these animals.

In addition to domestic conservation measures, hunting also plays a vital role in international conservation. When a U.S. hunter travels to another country to hunt, he or she brings money into the local economy. The hunting activity generates multiple jobs for the local people, as does the handling and shipping of the processed hunting trophy. Hunting gives wildlife value that is not realized in the absence of hunting, and it also creates incentives to discourage, if not outlaw, poaching of that animal. Key species that would be substantial beneficiaries of cooperative conservation-based ESA interpretation include the black rhino, Suleiman markhor leopard.

As of today the Fish and Wildlife Service still has not decided whether to approve vital conservation programs for these species despite the fact that they have had all the independent scientific data necessary to make these decisions for several years.

When it comes to endangered species, the Fish and Wildlife Service has drawn an arbitrary line in the sand. Despite acknowledging the benefits that hunting and importation can bring to endangered species, the Service has relied on the ESA to resolutely refuse to allow hunters to play a role in the conservation of foreign species. This arbitrary misuse of ESA authority must end.

I thank the Committee for the opportunity to testify on this important issue and ask the Committee to use its authority to recognize the role that hunting plays in species conservation to make certain that ESA is administered in a way that acknowledges and facilitates the role of hunting as a conservation tool.

Thank you.

[The prepared statement of Dr. Maki follows:]

Dr. Al Maki
Vice-President, Safari Club International
Testimony on "The Science of How Hunting Assists Species Conservation and Management" before the Committee on Science, Space and Technology, Subcommittee on Investigations and Oversight.
Tuesday June 19, 2012 2:00 PM

Mr. Chairman and members of the Committee, thank you for the invitation to testify here today. My name is Dr. Al Maki, and I appear before you as a member of the Executive Committee of Safari Club International, a non-profit organization with approximately 52,000 members. SCI's missions are the conservation of wildlife, protection of the hunter, and education of the public concerning hunting and its use as a conservation tool. I am a biologist by trade and a hunter and conservationist by choice. I applaud this Committee's decision to hold a hearing on a much misunderstood and often maligned topic – the essential role that hunting plays in the conservation of wildlife, both domestically and internationally.

Many in this country either do not understand or choose to ignore the role that hunting plays in species conservation. As a key example, my Safari Club International Foundation Conservation Committee currently stewards over sixty individual conservation projects all over the world and in the last five months alone we have contributed over $240,000 to conservation research. Also, since 1937 the federal Pittman-Robertson Act has provided individual states with funding for research and projects that would have been unaffordable otherwise. According to the U.S. Fish and Wildlife Service, as of 2010, over two billion dollars of federal aid has been generated through this program. The habitat acquisition and improvement made possible by this money has allowed several game species such as white-tailed deer, American black bears, elk, cougars, and others, to expand their ranges beyond where they were found prior to the implementation of this Act which is fully funded by American sportsmen.

Unfortunately, our own U.S. Fish and Wildlife Service understands the role of hunters in conservation, but often refuses to embrace it. Again and again, the FWS ignored the role of the American hunter and instead chosen to has employed the Endangered Species Act to prevent or inhibit the use of hunting as a conservation tool, rather than to encourage it.

The saga of three antelope species is a vivid example. The scimitar-horned oryx, dama gazelle and addax have all but disappeared from their home ranges in Africa. Here in the U.S., as a result of hunting, these species are – or at least were – thriving. In Texas and in several other states, owners of private ranches chose to raise and sell hunts for these animals and to use the proceeds to pay for the costs of upkeep and healthy breeding of these exotic species. The private citizens who raised, bred and hunted these animals, invested in the conservation of these species.

The fact that these animals could be hunted in the U.S. gave them great value, encouraging more and more ranchers to raise their own herds. The population numbers of these three species in the U.S. rose in a few decades from single digits to the thousands. Despite these successes, the anti-hunting community couldn't stomach the role that hunting was playing in these species' recovery and they threatened to sue the FWS if it did not list the three species as endangered based on their plight in Africa. Despite the arguments offered by SCI and other groups against the inclusion of the U.S. captive populations, the FWS listed both the native and U.S. populations as endangered.

As a result of further litigation, in April of this year, the FWS instituted full endangered status for the U.S. captive herds of the three species. Now, owners of these animals must obtain multiple permits from the FWS before they can sell hunts for these antelope. As a consequence,

the value of these animals has dropped precipitously. Many ranchers have gotten out of the business of raising herds of these animals because they are fearful of the bureaucracies and uncertainties involved with owning, breeding and selling members of federally endangered species. The ranchers can no longer be certain that the ownership of these animals will pay for itself. Not surprisingly, the numbers of these animals in the U.S. has declined. Private ranchers have suffered financially and they have lost the ability to participate in one of the most successful demonstrations of the role that hunting plays in conservation. The simple truth is by listing these species as endangered the Fish and Wildlife Service has undermined rather than benefitted the conservation of these animals.

In addition to domestic conservation measures, hunting also plays a vital role in conserving foreign species. While the U.S. lacks authority to dictate conservation for foreign species, through hunting and importation, the U.S. has a powerful tool to encourage foreign conservation. When a U.S. hunter travels to another country to hunt, he or she brings money into the local economy. The hunting activity generates multiple jobs for the local people, as does the handling and shipping of the processed hunting trophy. Hunting gives wildlife value that is not realized in the absence of hunting, and it also creates incentives to discourage if not outlaw poaching of that animal. Frequently, the fees and permits that the hunter pays support formal and informal conservation programs. Where a foreign nation or community might otherwise lack funding for a species in need of conservation efforts, the money generated by hunting supplies that funding.

A prime example of the positive role that hunting plays overseas is the Black Rhinoceros. In 2004, the parties of the Convention on Trade in Endangered Species approved a hunting quota of five black rhinoceros per year for both Namibia and South Africa. Removing a small number

of surplus, post-reproductive black rhinoceros through hunting enhances the survival of the species and promotes population growth. Hunting of one rhinoceros generates well over $100,000 in revenue, which is allocated to enhance conservation efforts for the species. Hunting is thus used as an efficient and cost-effective conservation tool. In addition, the high revenue potential associated with hunting black rhinoceros raises the value of each individual rhinoceros to the local people, which encourages protection of this resource. This has led to the virtual elimination of rhino poaching in Namibia.

Unfortunately, the U.S. has delayed recognizing the conservation benefits of Namibia's and South Africa's rhino hunting programs. A U.S. hunter submitted the first permit application to import a black rhino trophy from Namibia to the FWS in the fall of 2009. The vast majority of the conservation community, including but not limited to SCI, the World Wildlife Fund and the Association of Fish and Wildlife Agencies, support this permit. As of today the U.S. Fish and Wildlife Service still has not decided whether to approve this vital conservation program, despite the fact that they have had all of the independent scientific data necessary to make the decision for over two years.

The U.S. Fish and Wildlife Service recognizes the role that hunting plays in foreign species conservation and acknowledges many situations where hunting and importation enhance the propagation and/or survival of foreign species classified by the FWS as threatened. But when it comes to endangered species, the FWS has drawn an arbitrary line in the sand. The ESA does not prohibit the FWS from issuing permits for the importation of endangered species hunted in circumstances that enhance the propagation or survival of the species. Nevertheless, the FWS simply chooses not to do so. Despite acknowledging the benefits that hunting and importation can bring to endangered species, such as the straight horned markhor and the recently

reclassified wood bison, the Service has relied on the ESA to resolutely refuse to allow U.S. hunters to play a role in the conservation of foreign endangered species. The black rhino is the latest species to join the U.S. Fish and Wildlife Service's list of missed hunting/conservation opportunities. This arbitrary misuse of ESA authority must end.

I thank the Committee for the opportunity to testify on this important issue and ask the Committee to use its authority to recognize the role that hunting plays in species conservation and to make certain that the ESA is administered in a way that acknowledges and facilitates the use of hunting as a conservation tool for domestic and international species.

Chairman BROUN. Dr. Maki, thank you for your testimony, and I applaud the work that you and the Safari Club are doing towards true conservation efforts.

Dr. Pimm, you are recognized for five minutes, and take off.

STATEMENT OF DR. STUART PIMM, PROFESSOR, NICHOLAS SCHOOL OF THE ENVIRONMENT, DUKE UNIVERSITY

Dr. PIMM. Mr. Chairman, Members of the Committee, thank you for this opportunity to talk about this extraordinarily important subject. I am Stuart Pimm. I hold the Doris Duke Chair of Conservation at Duke University. Until recently, I was Extraordinary Professor at the Conservation Ecology Research Unit in South Africa.

I do not need to repeat what my colleagues here have said and what you as Chair so well summarized. We Americans benefit enormously from hunting, from the large areas, protected, duck hunters protect wetlands, recreational fishermen are passionate advocates for our rivers. At the quite personal level, all three organizations on either side of me, the Fish and Wildlife Service, Safari Club International, and the Florida Fish and Wildlife Conservation Commission, have aided my research group and my students.

The issue at hand is to do with the Endangered Species Act and the conservation of endangered species. I think it is appropriate to ask whether the act has been successful. It has been extraordinarily successful. Our Nation's bird, the bald eagle, is now in every State. The Hawaiian State bird, the Nene, whooping cranes, black-footed ferrets, gray whales, many other species are back from the very edge of extinction because of environmental protections.

Recovery is the ultimate goal of the act, and analyses show that the great majority of the species once listed are moving back towards recovery at the rate at which we scientists expect, if not overnight as some critics might hope.

The issue of endangered species and hunting, however, is complex. Nothing illustrates this better than two East African neighbors, Kenya and Tanzania. Kenya bans all hunting. Tanzania devotes more of its country to hunting than it does national parks. That hunting includes lions, and lions are IUCN Red List species. Whether they are managed well is a matter of considerable debate. It is not always easy to find out.

Well, does hunting harm endangered species? The answer has to be yes. I do know the difference between poaching and hunting. Poaching clearly does, but alas, many species that are poached are also hunted legally.

Now, as a Congressional Research Service report that I quote in my written testimony makes clear, the fact that ivory and lion bone and lion blood get into the marketplace legally or illegally creates a whole manner of ills, not least of which is terrorism. There is a very severe problem in Africa and elsewhere because of this intermingling of illegal wildlife trade. It is very hard for nations of the world to do something to protect elephants when there are occasional legal sales of ivory.

These are difficult and very complex issues. The situation for tigers illustrates this. There are more tigers in captivity, including in breeding facilities, than in the wild, but the market for tiger parts creates a massive problem for countries like India that try to manage their tigers.

So, yes, the trade, legal and otherwise, of animal parts, particularly of endangered species, can create a substantial amount of difficulties. I think the issue becomes can the Endangered Species Act and the Fish and Wildlife Service handle these complexities. My feeling is that there is a simple checklist of actions that we want to ensure those who have endangered species on their property can check off. Will those captive animals be returned to the wild eventually? Is there a recovery plan that can use and integrate the captive animals? Has sufficient attention been given to their breeding and to their genetics? Are the hunting ranches members of internationally recognized organizations and maintain the databases? Does the enthusiasm for hunting for species in captivity extend to supporting efforts to protect them in the wild?

My experience of the Endangered Species Act is that it handles these complexities well. I entirely agree that we in the conservation community and hunters share a common sense of purpose in our stewardship for the natural environment. I think these hearings, which I thank you for holding, give us an opportunity to initiate a very important dialogue.

Thank you.

[The prepared statement of Dr. Pimm follows:]

Stuart L. Pimm,
Doris Duke Chair of Conservation, Nicholas School of the Environment,
Duke University, North Carolina

Subcommittee on Investigations and Oversight Hearing: The Science of How Hunting Assists Species Conservation and Management Tuesday19th June, 2pm.

Mr. Chairman, members of the committee: thank you for giving me the opportunity to testify on this extraordinarily important topic. I am Stuart Pimm and hold the Doris Duke Chair of Conservation at Duke University in North Carolina. Until recently, I was also Extraordinary Professor at the Conservation Ecology Research Unit at the University of Pretoria in South Africa.

The implied question for this hearing is: does hunting assist species conservation and management? The answer is a simple "yes!" We Americans benefit from large areas protected for hunting, affording as they do the essential habitats for many other non-game species. Duck hunters protect wetlands, while recreational fisherman are passionate advocates for protecting our rivers.

At a personal level, Safari Club International has helped my students in Central America. My colleagues at Everglades National Park and I depend on hunters to track and tag Florida Panthers, allowing us to show how very successful this effort to bring these animals back from the brink of extinction has been. I could go on. Simply, hunters — broadly defined — and conservation professionals share a powerful common purpose in seeking effective stewardship of natural resources.

The issue at hand is whether hunting assists particular species conservation and, as I understand it, endangered species both nationally and internationally that fall under the Endangered Species Act. The answers here are more complex. In brief:

- Is the Act successful? An emphatic "yes!"
- Does hunting endangered species benefit their long-term conservation? It can, but often doesn't. Stewardship requires the conservation and hunting communities to resolve many difficult issues.
- Finally, do I think the Act is able to handle those difficult issues? Again, an emphatic "yes!"

Once a species is listed by the Act its chance of survival is excellent. Our National Bird, the bald eagle is now in every state. Endangered species protection has brought the nene — the Hawai'i state bird — the whooping crane, the black-footed ferret, grey whales, and many other species back from the very brink of extinction. "Recovery" is the ultimate goal of the Act. Analyses show that the majority of species are on their way to meeting their recovery goals. Species are "going forth and multiplying" at about the rates we scientists predict, if not "overnight" as some critics have expected.

Internationally, the Fish and Wildlife Service has a very small, but effective program — one that has supported my African colleagues and students for our work on elephants.

Nothing better illustrates the complexity of hunting endangered species than African wildlife. Kenya and Tanzania are neighbors in East Africa. Kenya bans all hunting. Tanzania devotes far more of its land to hunting concessions than to national parks. That hunting includes lions — an IUCN Red List threatened species. Whether they are managed well is a matter of considerable debate. My recent work on that subject suggests we simply do not know. What is certain is that some African countries that once allowed lion hunts no longer have them. Hunting — and the substantial income it can generate —does not guarantee good management.

Does hunting sometimes harm endangered species? Poaching obviously does. What about legal hunting? There are two circumstances — hunting inside a natural species' range and hunting captive populations outside its range, including in the USA.

For the former, by protecting land, hunting can do a great deal of good, but ivory illustrates the complexities. Even infrequent, government-sponsored ivory sales designed to raise revenues for wildlife conservation maintain a profession I would happily see go extinct — ivory carvers. Their continuation means that the many other countries without adequate policing are losing their elephants to poaching.

The situation for tigers is even more desperate. There are far more in captivity than in the wild, bred for their bones and blood used in traditional, if exceedingly dubious, medicines. Poaching is the most serious threat to tigers. African lions are now tarred with the same brush. Body parts from legal "canned hunts" of lions on private properties are now being sold as substitutes for tiger, putting pressure on wild lions and tigers alike.

To be blunt: the illegal wildlife trade is thought to be second only to drug trafficking and there is widespread speculation that these illegal activities associate with other ills, including terrorism [1]. In short, even legal hunting of endangered species has the potential to do considerable harm — unintentional harm, surely, but harm nonetheless.

Can hunting outside a species' natural range do good? Clearly, "yes!" The standards are high, however.

The ultimate goal of listing species is to conserve them and the ecosystems on which they depend and ultimately to secure recovery in the wild. Simply, having large numbers of animals in captivity — whether hunted or not — is not sufficient in itself. Neither is making more of a species for commercial exploitation.

I suggest this minimum checklist with regard to the hunting of captive, endangered species. If one answers "yes" to all these, then "bravo!"

- Can some of the captive animals be eventually returned to the wild?
- Is there a recovery plan that can use or integrate the captive animals in a scientifically sound manner? [2]
- Indeed, is there a need for captive hunting of a given species? Or are there already sufficient animals in well-funded zoos and like institutions?
- Has sufficient attention been paid to their breeding and especially their genetics? Are hunting ranches members of the recognized organizations that maintain the relevant breeding databases?

- Does the enthusiasm for hunting the species in captivity extend to supporting efforts to protect them in the wild or reintroduce populations where they have been extirpated?

The Endangered Species Act handles these complexities. The Act's regulatory regime is sound: it requires policy makers to look at the full record before we do something as bold —and potentially harmful — as allow an endangered species to be "taken." That is why the case-by-case, permit-by-permit method of the Act is so important.

In sum, good conservation takes good laws and good enforcement of laws — but it also takes good stewardship: responsible hunters, fishermen and sportsmen are sound stewards of our natural resources and we should not overlook that. Hunting is a part of conservation, as long as it is regulated with proper enforcement and as long as it conforms to sound ecological principles.

My Chairman, members of the committee: thank you for the opportunity to discuss these issues, initiating as it does, the opportunity for an essential dialogue between the conservation and hunting communities.

Footnotes

1. Congressional Research Service, Iternational Illegal Trade in Wildlife and U.S. Policy http://fpc.state.gov/documents/organization/102621.pdf

2. For example, in the USA, the Associate of Zoos and Aquariums has more than 300 Species Survival Plan Programs http://www.aza.org/species-survival-plan-program/

Chairman BROUN. Thank you, Doctor. Appreciate your testimony.

Now, Mr. Wiley, tell us about alligators. You are recognized for five minutes.

STATEMENT OF MR. NICK WILEY, EXECUTIVE DIRECTOR, FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Mr. WILEY. Yes, sir. Good afternoon, Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee. I appreciate this opportunity to testify. My remarks today will be from the viewpoint of State fish and wildlife agencies.

State fish and wildlife agencies have primary responsibility for managing the wildlife that reside within the States. We have shared responsibilities with federal agencies for migratory wildlife that cross State and international boundaries or reside on federal lands. State fish and wildlife agencies enjoy a longstanding and highly successful partnership with the United States Fish and Wildlife Service in providing scientifically managed, sustainable hunting for our citizens across the Nation.

Hunting is clearly an enduring feature of American history, culture, and heritage. Any person who cares about wildlife, whether they hunt or not, should be thankful to America's hunters for the generous and steadfast support they have provided for wildlife conservation since the early 1900s. The record is abundantly clear that hunters have been the first and foremost paying advocates for wildlife conservation and science-based management. They contribute hundreds of millions of dollars each year through excise taxes on firearms, ammunition and archery equipment, license and permit fees, and donations to conservation organizations. This "hunter conservationist" system is fundamental to the North American Model of Wildlife Conservation and a major reason game species are thriving in every State today.

Since the early 1900s, State agencies have utilized funding from hunters to invest heavily in the scientific management of wildlife, employing highly trained, professional wildlife biologists. Also, universities and federal agencies and conservation organizations contribute greatly to the wildlife science utilized by State agencies. All of this technical expertise provides a powerful scientific foundation for wildlife management. As a result, population dynamics and habitat requirements of hunted wildlife species are generally well studied. This information, in concert with science-based data collection, analyses and monitoring, sustains our very successful hunting and conservation programs.

Game management has been defined as the art and science of applying the principles of wildlife management to achieve a balance between the needs of people and the needs of wildlife. The fact that populations of game species annually produce a harvestable surplus is the basis for the biological theory underpinning the capacity for hunting. This harvestable surplus depends on how well a species of game survives and reproduces, in addition to the availability and condition of its habitat. Professional biologists apply various tools to collect the scientific data that defines this harvestable surplus and also ensures that game populations continue to thrive.

These tools include surveys that assess animal populations and annual harvest rates, studies where animals are marked with radio collars or leg bands, and direct surveys of hunters. In the hands of professional wildlife biologists, these tools can measure size and trends in populations, reproductive success, mortality factors, harvest levels, and hunting pressure. In a key piece, hunters frequently play a role in supplying this information and generally are enthusiastic about helping provide the data needed to ensure species conservation and the sustainability of hunting. This is another important way that hunters support wildlife conservation and contribute to its success.

After analyzing the biological and social information, agency biologists develop recommendations for the structure of hunting opportunities such as season dates, bag limits, or quotas. In most States, recommendations are presented to a governing body, often a commission or a legislature. These decision-making bodies absolutely rely on the fact that recommendations from agencies are based on sound science as they also thoughtfully consider input from the public in establishing hunting regulations.

I would like to wrap up by echoing remarks from Chairman Broun. We have a great success story in Florida that illustrates the inextricable links between hunting, science, and wildlife conservation. In 1967, the American alligator was listed as an endangered species because of unregulated market hunting. Today alligators are abundant throughout Florida, providing plentiful hunting opportunities. This remarkable recovery is largely due to the effective and exemplary science-based regulation and management. Public hunting of alligators has been allowed in Florida since 1988, and total harvests average now more than 20,000 per year. License and permit fees paid by alligator hunters provide the funding base for the science and management that insures alligator harvests are sustainable.

Moreover, Florida's economy benefits by more than $14 million annually as a result of alligator hunting and associated industry.

This example illustrates how management decisions about hunting are driven by reliable science and as a result, are effective and well supported by the public. Looking forward, I am confident that hunters will continue to be the strongest advocates for science-based wildlife management, habitat conservation, and sound public policy. And in doing so, they will continue to ensure our wildlife resources are robust, public access to wildlife is guaranteed, and future generations of Americans will enjoy a rich legacy of hunting across all 50 States.

Thank you.

[The prepared statement of Mr. Wiley follows:]

TESTIMONY OF NICK WILEY, EXECUTIVE DIRECTOR, FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, BEFORE THE HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY, SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT ON THE SCIENCE OF HOW HUNTING ASSISTS SPECIES CONSERVATION AND MANAGEMENT
June 19, 2012

Good afternoon Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee, I am pleased to be here today to provide testimony to the Subcommittee regarding *the science of how hunting assists species conservation and management.*

My remarks today will be from the viewpoint of state fish and wildlife agencies. State fish and wildlife agencies have primary responsibility for managing the wildlife that resides within the states. We have shared responsibilities with federal agencies for migratory wildlife that cross state and international boundaries or reside on federal lands. State fish and wildlife agencies enjoy a long-standing and highly successful partnership with the United States Fish and Wildlife Service in providing scientifically managed, sustainable hunting for our citizens across the nation.

Hunting is an enduring feature of American history, culture, and heritage. Any person who cares about wildlife, whether they hunt or not, should be thankful to America's hunters for the generous and steadfast support they have provided for wildlife conservation since the early 1900's. The record is abundantly clear that hunters have been the first and foremost advocates to pay for wildlife conservation and science based wildlife management. They contribute hundreds of millions of dollars each year through excise taxes on firearms, ammo, and archery equipment, license and permit fees, and donations to conservation organizations. This "hunter conservationist" system is fundamental to the North American Model of Wildlife Conservation and a major reason game species are thriving in every state today.

Since the early 1900's, state agencies have utilized funding from hunters to invest heavily in the scientific management of wildlife, employing highly trained, professional wildlife biologists. Universities, federal agencies and conservation organizations also contribute significantly to the wildlife science utilized by state agencies. All of this technical expertise provides a powerful scientific foundation for wildlife management. As a result, population dynamics and habitat requirements of hunted wildlife species are generally well studied. This information, in concert with science-based data collection, analyses and monitoring, sustain our very successful hunting and conservation programs.

Game management has been defined as the art and science of applying the principles of wildlife management to achieve a balance between the needs of wildlife and the needs of people. The fact that populations of game species annually

produce a harvestable surplus is the basis for the biological theory underpinning the capacity for hunting. This harvestable surplus depends on how well a species of game survives and reproduces, in addition to the availability and condition of its habitat. Professional biologists apply various tools to collect the scientific data that defines this harvestable surplus and ensures that game populations continue to thrive. These tools include surveys that assess animal populations and annual harvest rates; studies where animals are marked with radio collars or leg bands; and direct surveys of hunters. In the hands of professional wildlife biologists, these tools can measure size and trends in populations, reproductive success, mortality factors, harvest levels, and hunting pressure. Hunters frequently play a key role in supplying this information and generally are enthusiastic about helping provide the data needed to ensure species conservation and the sustainability of hunting. This is another important way that hunters support wildlife conservation and contribute to its success.

After analyzing the biological and social information, agency biologists develop recommendations for the structure of hunting opportunities such as season dates, bag limits, or permit quotas. In most states, these recommendations are presented to a governing body, often a commission or legislature. These decision-making bodies rely on the fact that recommendations from agencies are based on sound science as they also thoughtfully consider input from the public in establishing hunting regulations.

I would like to wrap up by referencing a success story from my home state of Florida that illustrates the inextricable links between hunting, science, and wildlife conservation. In 1967, the American alligator was listed as an endangered species because of unregulated market hunting. Today alligators are abundant throughout Florida, providing plentiful hunting opportunities. This remarkable recovery is largely due to effective and exemplary science-based regulation and management. Public hunting of alligators has been allowed in Florida since 1988, and total harvests now average more than 20,000 per year. License and permit fees paid by alligator hunters provide the funding for the science and management that insures sustainable alligator management programs. Moreover, Florida's economy benefits by more than $14 million dollars annually as a result of alligator harvests and associated industry.

This example illustrates how conservation and management decisions have been driven by reliable science and as a result, are effective and well supported by the public. Looking forward, I am confident that hunters will continue to be the best advocates for science based wildlife management, habitat conservation and sound public policy. And in doing so, they will continue to ensure our wildlife resources are strong and healthy, public access to wildlife is guaranteed, and future generations of Americans will enjoy a rich legacy of hunting across all 50 states. Thank you.

Chairman BROUN. Thank you, Mr. Wiley. I appreciate your testimony and the great job you all are doing in Florida. Not only managing alligators but all your wildlife species down there since, particularly since we are in a neighboring State and a great friend of mine, Dr. Tom Rainey, was chairman of the Fresh Water Fish and Game Commission down there, so I am very familiar with the great job you all are doing down there, and I appreciate it. Ms. Adams, who is on this Committee, wanted to come and greet you and introduce you, and unfortunately, she was detained in another hearing that she had to go to, so I express my greeting from Ms. Adams to you. I thank you for being here.

I want to thank you all for your testimony. Remind Members that Committee rules limit questioning to five minutes. The Chair at this point will open the first round of questions.

I now recognize myself for five minutes.

Director Ashe, a portion of the Fish and Wildlife Service budget is devoted to science. What portion of that is related to the science of how hunting impacts species management and conservation? Does any of this funding come from licensing, stamps, permits, excise taxes, the Pittman Ramage Funds, Wallet Bro Funds, et cetera?

And if so, how much? Are these funds used to support federal scientists, federal grants, state scientists, or State efforts, and how does the funding break down by category?

Do you need me to repeat the questions so you can write them down?

Mr. ASHE. First of all, none of our science funding comes from excise taxes, license fees, duck stamps. All of the funding, all of the license or all of the excise taxes that we collect go back to the States absent, I think, 1.8 percent in administrative costs that the legislation allows us to take, and all of the proceeds from the duck stamp go to conservation minus two percent for administration.

How much we spend on science in the Fish and Wildlife Service, we don't manage that as a separate category in the budget. We do have a growing scientific program within the Fish and Wildlife Service, which is about $30 million. That doesn't represent what we do in the context of science. We do much broader work than that, but that is the specific budget that we manage for science, and it is our highest priority to grow our capacity in science, and we are involved in an active endeavor to do that jointly with our State and other partners by designing a national and international network of landscape conservation cooperatives.

And so that is our highest priority in the context of a very challenging fiscal climate. Again, I don't track how much of that is directed precisely to management of hunting and fishing, but most of that would reside within our national wildlife refuge system, where 327 of our refuges are open to hunting, 271 are open to fishing, and most of the direct scientific investigation that we would be doing pertaining to hunting or fishing would be in relation to those activities.

Chairman BROUN. Then a lot of it goes to the States, and they do scientific studies, too.

Mr. ASHE. Nearly, well, about $700 million this year we provide to the States through the Wildlife and Support Fish Restoration

Program. Those are the excise taxes on hunting and fishing and motor boat fuel sales tax, and that money goes to the States, and they support significant amounts of research, but those priorities are set at the State level.

Chairman BROUN. If you can get us any data about how much the States spend out of those funds, it could be very helpful.

Mr. ASHE. Yes.

Chairman BROUN. And I appreciate you supplying that to the Committee.

Mr. ASHE. Absolutely.

Chairman BROUN. Then, Director Ashe, do the permitting delays of the U.S. Fish and Wildlife Service harm species conservation and management?

Mr. ASHE. I don't believe, I mean, I don't believe that the—I don't believe that they do. I mean, permitting delays is an unspecific—I will refer maybe to Dr. Maki's——

Chairman BROUN. I am fixing to ask him next.

Mr. ASHE [continuing]. Statement. I mean——

Chairman BROUN. I just would like a quick answer——

Mr. ASHE. Yeah.

Chairman BROUN [continuing]. Because my time is about out.

Mr. ASHE. All right. No, I don't.

Chairman BROUN. Okay. Dr. Maki, can you answer that question?

Dr. MAKI. Thank you, Mr. Chairman. We have examples. I tried to mention a couple. Certainly the species conservation would be benefited if we had facilitated a permitting process. The ESA provides for some very onerous steps that must be jumped through and in order to achieve those, they represent a significant impediment at times for some of the species that we deal with.

For example, the Suleiman markhor is one of the better examples we have in the country of Pakistan. The Tourgar Conservancy is the range of these animals occur. We have survey data consistently developed for that species indicating a robust population that would easily sustain an off-take annually.

However, we have been unable to convince Fish and Wildlife Service to issue those permits, and, as a result, the Suleiman markhor is missing out on potential conservation funds that would be benefited from the hunting of these species.

Chairman BROUN. Thank you, Dr. Maki. I have personally experienced this. In fact, I was working in Pakistan on some wildlife management issues with Suleiman markhor as well as the urials in Pakistan early on when the hunting was just beginning to be put in place. And it was Fish and Wildlife Service, and permitting problems actually stopped those hunting programs and actually the species was greatly harmed by the permitting process.

My time is up. I now recognize Mr. Tonko for five minutes.

Mr. TONKO. Thanks, Mr. Chair.

Perhaps to begin, Director Ashe, do you have anything you want to respond to in terms of Dr. Maki's comment?

Mr. ASHE. I would say that when we made the determinations for import or export under the Endangered Species Act, the basic decision standard that we have to meet is does the—will the activity support enhancement of the survival of the species in the wild.

And so if we deny a permit, it is because we don't see benefit for the species in the wild, and I realize that people will differ in their judgment about what benefits the species.

You know, Dr. Maki referred before to onerous permit requirements for the three antelope species. I have the permit here with me. It is six pages. Two of the six pages are the instructions for the application, and he referred to it as an uncertain process. Well, our regulation went into effect on May 18. We have received 97 permits for captive-breed wildlife facilities. We have issued 77 permits in that period of time.

And so I would say it is neither onerous nor uncertain. If the—and we have denied no permits during that period of time. So I would actually say that the permit process is quite friendly and quite predicable for the applicants if they apply. It is our hope that we can get them a permit. That is our objective.

Mr. TONKO. All right. Thank you very much.

The takings of in the Commerce and Endangered Species can only be justified under the law if it can be demonstrated that such activities are supporting survival of the species in the wild.

What programs would you share with us that the FWS runs are there to ensure that the canned hunting on ranches in the southwest actually fulfill the purposes of this act?

Mr. ASHE. The ranches in the southwest are providing a benefit to the survival of the species by maintaining a genetically diverse breeding population. Several of these are species that have been extirpated from the wild, so they do not exist in the wild, and so we are dependent upon captive propagations.

So they are providing a benefit. Are they essential to the conservation of the species? I think we believe not essential because we also have a very robust population that exists within the zoological community, but they are providing a benefit, and so we believe that the activities are appropriately regulated under the *Endangered Species Act*. We did try to exempt them from the permitting requirements. We were challenged legally. We lost, so what we are trying to do is provide the minimal opportunity necessary for them to comply with the law and conduct the commercial operation which they are conducting.

Mr. TONKO. And Dr. Pimm, if I might ask you, should the steps in this process, any of them be strengthened, or should there be clearer standards for these specific branches?

Dr. PIMM. I think Mr. Ashe has explained the situation really rather well. The ventures do benefit; they benefit by maintaining the genetic diversity, and there is a process that seems to me to be scientifically credible that leads to the right kind of decisions being made. It is, you know, you want to have animals, you want to have animals that are genetically diverse, you want to make sure that there will be introduction programs, and all of that requires a lot of very careful science. And my experience has been that the Service has the people to make a very reasonable assessment of those rather complicated issues.

Yes, I am a scientist. I love the idea of being given the opportunity to tell you we need more science.

Mr. TONKO. And also, well, I see I only have seconds left. I will yield back and catch you on the next round.

Chairman BROUN. I will be glad to give you a little leeway if you want a few more seconds.

Mr. TONKO. Are we going to do another round?

Chairman BROUN. Well, I don't know. We will see. Go ahead, and I will give you another little bit if you——

Mr. TONKO. Okay.

Chairman BROUN [continuing]. Want to ask one more question.

Mr. TONKO. Okay. Dr. Pimm, what happens to endangered species when there is insufficient funding for programs or low pay for government officials and an uncertain legal environment?

Dr. PIMM. I mean, the sad thing is that endangered species go extinct, and I think we lose at a variety of levels. We lose at an economic level because many endangered species generate huge amounts of economic activity. Currently the whaling industry now is worth a lot more than the whaling industry was, you know, when we hunted them. The whaling industry now is people going out and photographing them.

I also think, at a personal level as a Christian, that I have the role as a steward. I think stewardship is an ethical issue, and therefore, when species become extinct, I think that is a challenge to us and our society.

Mr. TONKO. Thank you very much. I yield back.

Chairman BROUN. Okay. Thank you, Mr. Tonko.

Dr. Bucshon, you are recognized for five minutes.

Mr. BUCSHON. Thank you, Mr. Chairman.

I am from—I grew up in Illinois. I did a lot of hunting also and primarily squirrel, pheasant, rabbit, and this is a little bit off topic but since I have you here, I am interested in the deer population in Illinois and in Indiana because I now represent Indiana, and as you probably know, there—it is a general impression that there are a lot more auto accidents related to the deer population in certain areas of our country, and I would interested to see how, Mr. Ashe, you work with State, the State officials to see what we can do about that, because my impression is is that—and I have been told there are more deer in Illinois now than there was in the 1800s. Obviously more food and things like that.

Can you touch on that maybe about what we can do about that? Because there is a significant economic impact of having an overpopulation of white-tail deer in Illinois and Indiana.

Mr. ASHE. We do work with our State counterparts, and I would maybe suggest you ask Nick Wiley to respond as well, but I think that responsible wildlife management is the key to dealing with that, and here—I am a resident in Maryland here, and we have a similar problem with overabundant deer populations, and especially in suburban, urban areas that is a very challenging issue to deal with. But it can be dealt with effectively where our State partners are expert in designing suburban and urban-based hunting opportunities but also other management techniques to reduce deer populations.

Mr. BUCSHON. Mr. Wiley.

Mr. WILEY. Yes, sir. That is an issue that is challenging many States, and we are having to get more creative, but it really—the solutions that are working in most States are—start with working with the local community and kind of developing a plan that they

can accept and implement, and many times they quickly realize hunting is the best tool to apply, but you have to do it carefully using methods such as archery and things like that are more compatible with an urban environment.

So and also you look at the land surrounding the community. If you can increase your quotas and increase your harvest pressure in those areas, sometimes that can help as well. So definitely by working with those communities to get their buy-in and support is a key.

Mr. BUCSHON. Thank you. Dr. Maki, as it relates to that, as you probably know, I mean, even since I was a kid in the '70s, we have a declining number of young people interested in hunting, and that I think is probably contributing somewhat to the problem I just addressed. Is there anything we can do out there to help with that?

Dr. MAKI. Thank you. Well, certainly hunter retention, hunter recruitment is one of the bigger issues the Safari Club is working with. The education of the young, bringing them onto safe gun handling, exposing them to the outdoors is one of the initiatives that we have launched through many of our education programs and outreach efforts in our, through our chapter network throughout each of the individual States.

Mr. BUCSHON. And also, Dr. Maki, Dr. Pimm's testimony advocates for several conditions to hunting captive endangered species, specifically the reintroduction of some captive animals into the wild, the development of a recovery plan for reintroduction, termination of the need to hunt captive species versus sanctuaries and zoos, attention to genetics and breeding concerns, and finally, efforts to protect species in the wild.

Do you have any comments as it relates to those criteria?

Dr. MAKI. Yeah. All good points and ones that haven't gone by us at all. Certainly the examples with the three antelope that are consistent to this hearing is a good example. Those captive populations in Texas served as reintroduction stock back into their natural ranges in several North African countries. So it does, indeed, serve the purpose of reintroduction. We have recognized for some time now that the breeding and genetics issue not only in captive wildlife but in true wild populations is a big issue, and we have instituted now an international genetic sampling program where we encourage our hunters to take both blood and tissue samples of the animals, and it is our hope eventually we will develop a genetic bank where we can keep track of the stocks around the world. This program is administered currently through Texas A&M, and we have literally thousands of samples being cataloged in that program.

Mr. BUCSHON. Thank you, Mr. Chairman. I yield back.

Chairman BROUN. Thank you, Dr. Bucshon.

Mr. McNerney, you are recognized for five minutes. I don't know if you are a hunter or not.

Mr. MCNERNEY. You are going to find out.

Chairman BROUN. Okay. Well, good. You are recognized for five minutes.

Mr. MCNERNEY. Well, I appreciate you calling this hearing.

Dr. Pimm, it seems that a productive partnership can develop between scientists, government officials, and hunters. Could you

speak a little bit about the science involved? What does the science do? What role does it play in that sort of a partnership?

Dr. PIMM. I think within the 25 years, 30 years that the Society for Conservation Biology, which is my professional organization, has existed, that we have come to develop a whole variety of very sophisticated skills. They involve analysis of satellite imagery to work out where the habitats are, understanding population dynamics, what kind of harvests we can have, a very full understanding of the quite tricky genetic issues that we, Dr. Maki and I have both mentioned.

And there is, I think, a very strong interconnection between all of the organizations represented on the table here of this sort of feedback between the science and the management, as I alluded to earlier. All three of these organizations are funding, indirectly or directly, the work that my research group does. I have former students who work for the Fish and Wildlife Service, Park Service. I think it is a good interchange of ideas.

Mr. MCNERNEY. Well, good. That sort of gives me a scope of what is involved. It is a pretty big effort.

Dr. PIMM. It's broad. I think it's broad, and it is, as we have seen from the really extraordinary successes of the Endangered Species Act, what—how very effective it can be.

Mr. MCNERNEY. At least for the large animals.

Dr. PIMM. At least the large animals. Yes.

Mr. MCNERNEY. Mr. Wiley, I have a question I have had in my mind for years. Natural predation in the wild selects the weaker members of a species. Does hunting play that same role, or does it sort of randomly select members of a species? If you could answer, if you address that.

Mr. WILEY. Yes, sir. It is a common assumption. It is not always the case that even natural predation selects the weaker ones, but just—hunting is less about that. Hunters are more selective, and some hunters are out there for the experience and just want to take game home. Some hunters are more after a trophy of the species. So I would say the hunting approach is much less about selecting of a weaker species.

Mr. MCNERNEY. Dr. Pimm, you have talked a little bit about this. What does it take to introduce or reintroduce a species into the wild? I mean, that is—for one thing, the species disappeared because of a lot of different reasons, some of them having to do with habitat. So a lot has to be done I would think to introduce it, reintroduce a species successfully. Is that correct?

Dr. PIMM. That is indeed correct, and many species have disappeared from the wild because they have been overhunted, poached. Let us be clear. Usually. So there has to be the right amount of habitat, there has to be some means of controlling the hunting, whether it was legal or illegal, the animals need to be as genetically diverse as we can because most introduced populations are small. So we want to make sure that there is as full a representative, representation of the genetic variability.

All of those are issues that we did not well understand 25, 30 years ago, and I think we understand very, very much better now. In my role as a professor in South Africa, we looked at several hundred introductions of antelope that took place over the last 60

years. Most of them have been successful by paying attention to these kinds of issues.

So a proper effective collaboration between hunters and those who hunt in game parks and the scientific community and the game management authorities of different countries can, indeed, be extremely successful.

Mr. MCNERNEY. Good. Thank you. Mr. Ashe, how can a U.S. agency further species protection goals in the countries where poaching may be legal and be consistent with our other foreign policy objectives in a country?

Mr. ASHE. Many of those countries present great challenges for us where we have difficulty placing people because of security concerns. Congo is a recent example where we have been working for years on great ape conservation and now is a country that is very difficult to travel in, maintain a presence in, and many of those places were dependent upon our NGO partners who have, you know, a greater capability to travel in and work in those areas. So partnership becomes much more important. Law enforcement becomes a key ingredient in those cases, effectively equipping and training local law enforcement.

And most recently what we have been focusing on is finding ways to provide security for the families of law enforcement personnel who are killed in the line of duty, because many of them are because they are dealing with heavily armed opponents in the battle. And so one of the emerging ingredients is our ability to provide security to their families in the event that they are killed in that line of duty.

Chairman BROUN. Thank you, Mr. McNerney. We will get a second round of questions, and I now recognize myself for five minutes.

Dr. Pimm, I want to be blatantly clear. I don't have a question. I have got a comment. Poaching and hunting are two totally separate, different things, and please do not confuse the two in——

Mr. PIMM. Mr. Chairman, I did make that clear.

Chairman BROUN. Well, I know, but I just want to make that clear to anybody who looks at this record and the testimony that hunting and poaching are two totally separate issues, and poaching needs to be dealt from a law enforcement perspective.

Director Ashe, why is the Fish and Wildlife Service not acted on the black rhino permit discussed in Dr. Maki's testimony, despite having all the necessary documents to make a decision for four years now?

Mr. ASHE. Mr. Chairman, I believe we do not believe we have the necessary information. Black rhinos are among the most endangered animals in the world, and so the standard of evidence is high in that case. I am not intimately familiar with those two incidents. We do have two trophies, I believe, for which applications have been pending, I think for two years within the Fish and Wildlife Service, but I would be happy to get you more information.

Chairman BROUN. Please do, if you would, get us the information and get the individuals involved in the information so that they can do this, because I believe it is absolutely vital that you make a decision and do it quickly so that those funds can be made available for the conservation of this very precarious situation with the

black rhino. I have seen some black rhino in Africa, and they need to be supported, and hunters are going to support them and keep them viable and issuing that permit is absolutely critical.

What is the Administration's position on importation of trophies legally collected overseas? And what about those trophies that were legally collected prior to the species being declared endangered?

Mr. ASHE. Across the board, I mean, there are, well, there are pre-act trophies, which, of course, can be moved without restriction. Animals that were taken prior to their—trophies that were taken prior to a listing generally are not exempted, so they have to, they still have to follow the importation requirements. I think—but our record is very good on trophy importation. On the average we clear 99 percent of all trophies that are requested for clearance are 99 percent are cleared.

So in my experience 99 percent is an A plus, and so that doesn't mean that in certain cases we have problems. It doesn't mean that we can't do better. We strive to do better all the time, but I think our record is very, very good at providing support that is necessary for a vibrant trophy importation and exportation industry.

Chairman BROUN. I am not sure I would agree with your data nor would I agree with your grade point there, Director. My own experiences from being with Safari Club International for many years and being their advocate up here in Washington, the data that I have is not according to yours.

Dr. Maki, would you like to comment about that?

Dr. MAKI. Thank you, Mr. Chairman. Well, of course, there are a number of species, examples that don't quite fit the example of expeditious permitting that we heard. One of the more egregious examples is the polar bear situation, where the listing of polar bears did occur in the middle of the year, the middle of the calendar year; however, over 40 hunters had been in the field during that winter, and due to the permitting process you have to take your polar bear, then return and apply to the Fish and Wildlife Service for the import permit.

Well, during that wait period while they were waiting for their permits to be processed, the Act was enabled that put the polar bear on the ESA listing, prohibiting from importing at all, and those bears that were legally taken when the season was open, before the regulations, are now snagged in the bureaucratic tape here because a permit for their import will not be issued.

Chairman BROUN. In my few seconds left, I thank you, Dr. Maki. I think it is blatantly unfair to a hunter who goes and collects the trophy, spends his money, his time, and his energy and efforts, and those funds can be utilized in a management program, to be denied an import permit when those trophies were taken in a very legal way with due conscience and try to do so and to come back retroactively and deny them a permit. I think it is blatantly unfair.

My time has expired.

Mr. Tonko, you are recognized for five minutes.

Mr. TONKO. Thank you, Mr. Chair.

The question, Dr. Pimm, that was earlier posed by our colleague from California concerning the reintroduction of a species into the wild, would hunting ranches play a meaningful role in that process?

Dr. PIMM. That is a question that has a set of conditions. I mean, theoretically the answer can be yes. It can even be an emphatic yes, but it is not just a matter of numbers. The fact that you may have a thousand or 10,000 animals in captivity doesn't immediately mean that you are better off. Those animals—the purpose of the Act is recovery, recovery in the wild.

So what is going to happen to those animals? Are they going to be put back into the wild, and if they are going to be put back into the wild, amongst other things, there has to be a plan for that, there has to be a place for that, and we need to have some understanding of what the genetics of those captive animals are.

So at one end you have got really wonderful programs where people have been keeping an eye on the genetics of the species, we have what is called a stud book so we know who, you know, who your parents are, your grandparents, but unfortunately, at the other end there are some nightmare situations, and I am not in any sense trying to say that I don't know the difference between poachers and hunters, but there is a continuum where you have some captive populations, tigers are a fairly obvious example, where those animals are never going to contribute anything to the wild. On the other well-run programs and Dr. Maki has talked about the criteria for those as well, where those programs could, indeed, be very beneficial.

Mr. TONKO. Thank you. Director Ashe, you made a strong case for raising the price of the duck stamps. This program is a model of how hunter support can be turned to the broad advantage of the public, which obviously benefits directly and indirectly for the wetlands protections the program has created. And it has been wildly successful, and I would like you to explain, if you would, please, to emphasize this point how long it has been since the stamps have increased and the consequences for the success of the program are being stuck at that funding level.

So if you could develop your thoughts, please.

Mr. ASHE. 1991, is the last time that the duck stamp price was increased. It was raised from $7.50, kind of stepwise, up to $15, and the—right now the purchase price of the duck stamp, which was begun in 1934, is the lowest it has been; the purchase value of the duck stamp is the lowest it has been in the history of the stamp.

And so—and now we are faced with this economic situation where agricultural land values are skyrocketing, and of course, the key breeding area for waterfowl is in the American prairies, in the Dakotas and western Minnesota. And so we are competing with a booming of farm economy for that same real estate.

So we are proposing to increase the duck stamp. Senator Murkowski and Senator Begich have cosponsored legislation in the Senate that would provide the Secretary of the Interior with authority working through the Migratory Bird Commission to set the price of the duck stamp, and we support that legislation, as do all the major conservation and waterfowl organizations.

So it is time. We have a sense of urgency and crisis now with our migratory waterfowl resource, and we strongly support efforts by Congress to increase the price.

Mr. TONKO. Thank you. Any comments concerning the duck stamp from any of our other witnesses?

Mr. WILEY. Yes, sir, if I may. I think this is a great example of how hunters have always led and always been willing to step up to the plate and pay for conservation, and Director Ashe just mentioned the support for this, and I think that is a great indication and illustrates that hunters have always been there when they were needed.

Mr. TONKO. In terms of the projected or recommended increase, are you comfortable with that, Mr. Wiley, or should it be something other than what is being presented?

Mr. WILEY. We are comfortable with that because they have done the analysis and looked at the economic variables, and so we are comfortable with following that lead. Yes, sir.

Mr. TONKO. Thank you very much. I yield back, Mr. Chair.

Chairman BROUN. Mrs. Adams just arrived, and so, Mrs. Adams, you are recognized for five minutes.

Mrs. ADAMS. Thank you, Mr. Chair, and I appreciate your patience. We were in judiciary markup, so it took a little while.

Mr. Wiley, I just have a question for you. I want to ask you about the black panther. I understand the Florida has successfully kept the population and its food supply up, but some are still pushing to make it endangered. What are your thoughts on this, and how would this affect Florida?

Mr. WILEY. We actually have the Florida panther in southwest Florida, and it actually is endangered now, and it is a management challenge we share with the Fish and Wildlife Service. We have been working for quite a while now to work for recovery of that population, and actually it is, I call it a success story. We have come from about 30 animals up to as many as 160 now that are adults.

But it does bring with it plenty of challenges, and we are working with the communities down there that are concerned about panthers in their backyard, we are working with the hunting community to make sure—we have a long tradition of showing that hunting is compatible with panther recovery, but we are continuing to work on that, and that is something that is a big issue for the State of Florida.

Thank you for asking.

Mrs. ADAMS. Thank you. I rushed in, and it is the Florida panther. Sorry. It has been a busy day between floors and buildings.

Dr. Maki, how can the value of hunting be better communicated to society as a whole?

Dr. MAKI. Thank you for the question. It is an interesting topic and one that I wrestle with almost on a daily basis. It is an issue that we need to make more connection with the public to make that understanding better or simply grasp across the general population. Hunters, indeed, the data are indisputable. The model has been in place now, the North America Conservation Model of hunter-based conservation. It is very effective. It is a matter of getting over the credibility gap on one side; how can you call yourself a hunter for shooting animals and yet be a conservationist?

And the reality is once you enter into that debate, you realize that the hunters are, indeed, providing the largest source of con-

servation funding. Getting an education program under way, focusing on that point, protection of hunter rights, and education of the public is one of the big priorities that Fish—that we have here in our SCI programs and our American Wilderness Leadership School that we conduct annually.

Mrs. ADAMS. Thank you, and Mr. Wiley, I want to ask you another question, and I want to tell you that I have been home and seen some of the footage of a panther in I guess a tree not far from some homes, so I know there are some wandering around down in Florida. I have seen them out in the wild, so to speak.

The American alligator is a success story of a formerly endangered species now off the endangered species list. Please comment upon the conditions suggested by Dr. Pimm in his testimony for hunts of endangered species. Would these conditions have prevented or slowed the restoration of the American alligator?

Mr. WILEY. That is a great question. We probably didn't have a scenario that would really test that very well in Florida because it was, you know, the alligator population recovered so fast we were having them in everyone's backyard swimming pools, we were having to move them. So we were in a stage.

When we got into a hunting scenario, we were behind the curve already, and we are still working to keep up with population.

So I would say that if we would have gone into this highly regulatory, highly restrictive, it would have slowed things down, and looking back, we probably didn't move fast enough with opening up harvest programs.

So it is a great case study to look at and learn from.

Mrs. ADAMS. Thank you. As someone who used to be a law enforcement officer and was called to catch an alligator one time, I can relate to that.

With that I yield back.

Chairman BROUN. Thank you, Mrs. Adams.

It has been a very interesting panel discussion, and thank you all for your testimony, your witness today, and answering Members' questions.

Members may have other questions for all of you all. By the way, you all is plural for all you all in southern if you don't know. [I am sure Dr. Pimm from South Africa may not know that, but you all—there may be some more questions.] We would appreciate you all answering those questions in writing and getting those back as expeditiously as possible. I know I have got a whole bunch more questions for you all, all you all, and the record will remain open for two additional weeks for comments from Members.

I thank you all for being here. The witnesses are excused, and the hearing is now adjourned.

[Whereupon, at 3:42 p.m., the Subcommittee was adjourned.]

Answers to Post-Hearing Questions

ANSWERS TO POST-HEARING QUESTIONS

RESPONSES FROM HON, DANIEL ASHE, DIRECTOR, U.S. FISH AND WILDLIFE SERVICE

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
Subcommittee on Investigations & Oversight
June 19, 2012, Hearing Entitled "The Science of How Hunting Assists Species Conservation and Management"

U.S. Fish and Wildlife Service

Questions from Dr. Paul Broun, Chairman

1. **On a recent 60 Minutes story concerning domestic managed hunts in Texas, an anti-hunting activist stated that she would rather see an animal go extinct, rather than be hunted. Do you agree with her statement? What are you and your agency doing to educate the public about the benefits of the legal and responsible hunting for species recovery?**

   Response: Hunting and fishing plays an important role in wildlife conservation and management. For more than a century, hunters and anglers have worked tirelessly to ensure an abundance of game and the enforcement of laws to protect wildlife populations. They have taken the lead to promote a use-pay system, willingly paying fees to sustain populations of common species like bison, wood duck, and wild turkeys that were nearly decimated by the excesses of commercial hunting. Sportsmen and women have consistently and willingly supported funding wildlife conservation and management efforts through license fees and excise taxes on the equipment they use in the field. Since the establishment of the Wildlife and Sport Fish Restoration Program, hunters and anglers have paid more than $11 billion in user fees on purchases of firearms, ammunition, archery, fishing and boating equipment. Those funds have in turn been used by state wildlife agencies to maintain and restore fish and wildlife resources, educate hunters, and fund sport shooting ranges nationwide.

   The U.S. Fish and Wildlife Service (Service) supports hunting in many ways. We recognize the key role hunting plays in the long term conservation of wildlife resources in the United States, maintaining an important culture of the Nation, and connecting people with nature in a unique way. The Service also supports species recovery and is charged by law to seek to prevent extinction of species. The Service has not been confronted with a choice between hunting of a species and extinction of a species.

   The Service has consistently supported scientifically based hunting programs that facilitate sustainable harvest levels. Hunting may benefit the survival of a species if the hunting program and other activities are carried out in a manner that contributes to potential reintroduction or to increasing or sustaining the number of animals in captivity. For example, the Texas ranches that maintain three African antelope species—scimitar-horned oryx (*Oryx dammah*), addax (*Addax nasomaculatus*) and dama gazelle (*Gazella dama*)—provide a benefit to the survival of those species. Ranches and large captive wildlife parks for non-native populations offer tracts of land that simulate the species' native habitat and can accommodate a larger number of animals than most urban zoos. These facilities also help to maintain a genetically diverse breeding population. However, it must be pointed out that the ranching operations are not essential to the survival of the three antelope species.

The zoological community and other captive breeding facilities maintain a robust population of these species.

On national wildlife refuges, the Service supports hunting as a priority public wildlife dependent use. More than 360 units of the National Wildlife Refuge System have hunting programs that support more than 2,500,000 hunting visits each year. These programs are promoted in local communities and are a large reason that national wildlife refuges are important to local economies.

2. **With the continuing need for funds to operate private game ranches, actions that make hunting more difficult threaten not only the operation of a private game ranch, but also the recovery of the species that inhabit those ranches. What is the current average time for a permit to be issued for the taking of an endangered species on one of these private game ranches? What is the longest time it has taken to issue a permit? Has the FWS attempted to identify permitting processes that would ensure both species recovery and hunting?**

   Response: Game ranches in the United States have successfully maintained populations of threatened and endangered non-native species such as the red lechwe (*Kobus leche*, threatened), Arabian oryx (*Oryx leucoryx*, endangered), barasingha (*Cervus duvauceli*, endangered), and Eld's deer (*Cervus eldi*, endangered) under the same permitting requirements of the ESA that we are now applying to the three African antelopes. The Service is confident that this same permitting process will allow game ranches with the three African antelope species to continue their activities, including hunting, and contribute to the conservation of these endangered species under the ESA.

   To date, the Service has issued permits to 91 ranches that maintain one or more of the three African antelope species. The average processing time, including the mandatory 30-day comment period established under the Endangered Species Act (ESA), has been 68 days. In one case where an applicant submitted an incomplete application, it took the Service 129 days to complete its review because we had to go back to the applicant twice to obtain the additional information needed to complete our review and meet the requirements of the ESA.

   The Service continually monitors and adapts our permit application process to expedite the review that ensures permits issued meet the issuance criteria established in the ESA and our regulations with a minimal burden on the applicant. In the case of Texas game ranches, we have participated in several meetings to understand how the ranching industry works and how our permitting process can best be adapted to fit their operations. We also conducted a day-long workshop in Kerrville, Texas, in early 2012 to discuss the permitting process with representatives from over 75 game ranches. The purpose behind our permitting process is to ensure that activities involving endangered and threatened species on game ranches fulfill the purposes of the ESA and provide a direct benefit to the species in the wild.

3. **What is the Administration's position on the importation of trophies legally collected overseas? What about trophies that were legally collected prior to a species being declared endangered? How long is the backlog of such trophies waiting to be approved**

for importation and what steps would you support to reduce it? How much money would be generated for conservation and species protection if those permits were approved? Finally, what is a reasonable amount of time that a hunter should be expected to wait to import any trophy that was legally acquired?

Response: The Service does not oppose the importation of legally hunted trophies that meet the standards established under the various laws and treaties that regulate imports of wildlife specimens, particularly the ESA and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This includes trophies of currently listed endangered or threatened species that were hunted before the listing occurred.

In the last year, the Service has authorized the importation of 107 bonteboks (endangered under the ESA) from South Africa, 602 leopards (threatened), 84 African elephants (threatened), and 160 argali sheep (threatened), as well as a large number of lion and antelope trophies that do not require U.S. import permits.

A small number of applications for importation of sport-hunted trophies are currently pending. The Service has two applications for the import of black rhinoceros and 11 for the import of sport-hunted elephants taken in Zambia during the 2012 hunting season. All of these applications have been pending until additional information is received from the countries from which the specimen was taken from the wild. Assuming the material received provides the necessary information on the use of hunting proceeds, we anticipate issuing these permits by the end of the year.

The amount of money that can be generated through well-managed hunting programs depends heavily on the value of the species being hunted. If U.S. hunters are willing to pay a sufficient amount to obtain a trophy, the harvest of that individual animal can make a meaningful contribution to the conservation and management of the species, and thus allows us to find that the import will enhance the survival of the species, as required by the ESA (16 U.S.C. 1539). There does appear to be clear evidence, however, that a well-managed hunting program for a highly valued species can generate significant amounts of funding for conservation programs. This is one factor the Service considers when reviewing applications for the import of threatened and endangered species.

The Service strives to process applications as quickly as possible. On average, considering all applications received for the importation of a sport-hunted trophy, the Service issues import permits within 37 days of the receipt of an application. The Service continues its efforts to minimize the processing time for applications while still meeting the requirements of the laws that regulate the import of trophies. For example, we are currently working toward electronic permit applications so that hunters can apply online for their permits. Once implemented, processing times for obtaining permits for most elephant, leopard, argali, and bontebok trophies should be greatly reduced.

4. **Why has FWS not acted on the black rhino permit discussed in Dr. Maki's testimony? If necessary documents are missing, which ones are they? Once all of the paperwork has been submitted, how long will it take for the permit to be issued?**

Response: The application to import a black rhinoceros from Namibia was received on September 30, 2009. The Service's review is almost complete. The Service is currently awaiting clarification from Namibia regarding the amount of rhinoceros conservation funding that is generated from these hunts, which will help determine if the import enhances the survival of the species in the wild as required by the ESA. While we have received anecdotal accounts of how much money is generated by a single black rhinoceros hunt (upwards of N$200,000 [equivalent to US$24,000]), the Service has not received official confirmation of how much of this money or other funds generated from a hunt are used for rhinoceros conservation. Once this information is received, the Service can make a final decision on the application.

5. **Once this initial black rhino permit is issued, will future black rhino permits be handled more quickly since many of the issues will be similar?**

Response: If this permit is issued, the review of Namibia's program that the Service has carried out will greatly reduce processing time for future applications to import a black rhinoceros trophy from Namibia. We anticipate that a review of a subsequent application would not exceed 60 to 90 days, including the mandatory 30-day public comment period. However, the processing time may vary if factors, such as a change in the status of the species or to Namibia's black rhinoceros management program (including hunting), compel the Service to revisit the situation in Namibia to ensure that the legal requirements for the import of trophies continue to be met.

Responses to Questions for the Record by Dr. Al Maki in regards to testimony on "The Science of How Hunting Assists Species Conservation and Management.

1) Can you highlight in detail the on-the-ground impacts of legal hunting in impoverished areas of the world that do not have the resources to protect species from illegal poaching?

The sustainable-use of wildlife has been central to both the recovery of numerous species and the prevention of poaching and human wildlife conflict in impoverished areas. It is the economic incentives that hunting provides that are the lynchpin to species conservation.

The role of hunting in rural communities of many developing countries is vital to their livelihoods. Using Asia and southern Africa as examples, sport hunting has been one of the main economic engines in rural communities. In many countries of Asia and southern Africa, agrarian or pastoral economies cannot flourish, due to limited land suitable for agriculture or grazing. In these areas, regulated sport hunting has been a consistent form of revenue for local communities. To take better advantage of sustainable wildlife use, many governments have begun Community Based Natural Resource Management (CBNRM) Programs. These programs, in essence, devolve power from the central government so that locally created community councils can regulate and manage wildlife in their areas. Their mission is to utilize wildlife so that it remains a sustainable resource for their community.

Again and again, communal programs have been successful because they effectively create a financial incentive for the rural communities to actively conserve wildlife. Many big game species such as elephant, lion and leopard, urial sheep and markhor in Pakistan are all very successful examples. Revenue retention schemes ensure that money generated from sustainable use ends up in the hands of indigenous people. In the case of sport hunting in Asia and southern Africa, communities in the most rural portions of countries reap the benefit of conserving wildlife through CBNRM Programs.

Hunting creates value of wildlife that would not be realized in the absence of hunting. This value creates incentives to discourage if not outlaw poaching of that animal. Attitudes of local people in the developing world do not favor proactive wildlife conservation in the absence of such incentives, and regulated hunting is widely used as a mechanism to transform wild animals to a consistent tangible value for the community. If not for hunting, wildlife that poses threats to human livelihoods would be killed.

Below are some figures that quantify positive economic impacts that are associated with hunting in Africa.

1. International hunting by 18,500 hunters generates $200 million USD annually in remote rural areas of Africa in 23 countries. Private hunting operations conserve wildlife on 540,000 square miles, which is 22% more land mass than is found in all the national parks of Africa. (Lindsey, Conservation Biology, 2007)

2. "Hunting is of key importance to conservation in Africa by creating [financial] incentives to promote and retain wildlife as a land use over vast areas..." (National Geographic News, March, 2007)

3. In Namibia, 29 conservancies involve almost 150,000 rural individuals through trophy hunting, conservancy management or secondary industries. (Weaver, C.L. & Skyer, P. 2003.)

4. The Zambian Wildlife Authority works with safari operators to ensure that as part of their contract they must develop and manage roads, employ Zambian Professional Hunters or Apprentice Hunters, ensure that a minimum of 80% of labor comes from neighboring communities, develop local infrastructure, notably schools, clinic and wells, and employ Zambian game scouts to manage wildlife and poaching. (Kampamba, G. 2005.)

5. International hunting employs approximately 3,700 people annually in Tanzania. (www.tanzania.go.tz/) and supports over 88,000 families (Hurt & Ravn 2000)

2) What additional science efforts should the Fish and Wildlife Service invest in to boost species conservation?

Boosting species conservation does not simply happen with more regulation or conducting research. It also does not happen in the writing of management plans. An ecosystem level approach that includes management of habitat, game populations, and human interactions is necessary to develop meaningful conservation programs. Boosting species conservation is best achieved with focused efforts that improve habitats and provide the conditions species need to increase their productivity. For example, you can set hunting regulations and write a management plan for moose in northern New Hampshire, and you can do all kinds of research on moose, but it isn't until you cut the forest and allow the forest to regenerate that moose populations will increase in response to the abundance of food. Generally, SCI Foundation suggests that the U.S. FWS apply financial resources to physical changes of wildlife habitats and populations that will promote enhancement of target species.

The SCI Foundation is aware that many developing countries have done research, set regulations, and have even written management plans that are not fulfilled. The greatest need is improved implementation of those management plans and on-the-ground conservation efforts. In Southern Africa, where SCI Foundation is highly involved in conservation, we know that most of the governments have developed lion management plans, elephant management plans, and plans for land-use and Trans-Frontier Conservation Areas. Key threats to lions, elephants, and wildlife generally are identified in these plans, but there are no resources available to implement mitigation strategies. Human-wildlife conflict mitigation, antipoaching, species population enhancements, wildlife habitat improvements and zoning of lands to prevent fragmentation are just a few areas that African governments are trying to address.

SCI Foundation encourages the U.S. FWS to apply financial assistance to implementation of Africa's wildlife management plans. If lions are a priority for the United States, then the U.S. FWS is welcomed to approach a specific government and fund or help create an actual conservation project that is based on the lion management plans produced. SCI Foundation has provided the U.S. FWS with each national and regional management plan that has been produced for lions. Such conservation efforts are bound to be successful because they are based on the best available science-based information.

Including local peoples that live with and utilize wildlife resources is essential to conserve biodiversity, especially in developing countries. SCIF's largest single program in Africa, the African Wildlife Consultative Forum (AWCF), brings together governments and other stakeholders to solve current problems in wildlife management, and particularly regulations and best practices that are successful. The forum shares the best available science to guide high level decisions in wildlife management. We strongly encourage the U.S. FWS to promote such platforms that integrate science into cooperative wildlife management. SCI would encourage continued USFWS participaton in the AWCF and we encourage the attendance of upper level USFWS managers. Financial support of the AWCF is welcomed, and SCI Foundation would be interested in working with the U.S. FWS to create such forums in different parts of the developing world.

Additionally, SCI is concerned that an increasingly larger number of USFWS employees do not hunt, have never hunted and most importantly they do not fully understand the basic tenets of the North American Model of Conservation. This model, originally outlined by such forward thinking individuals as George Bird Grinnell and Theodore Roosevelt over 120 years ago, is at the very root of the conservation movement in the USA. Hunters, following the guidelines of sustainable use of wildlife were the original conservationists and remain the single largest source of fiscal support for wildlife conservation today. Unless a USFWS employee fully understands this fundamental relationship between hunting and wildlife conservation, the programs being administered by USFWS will not carry the proper focus on science-based management and will continue to cater to extremist group influences. SCI strongly recommends that all USFWS employees be properly exposed to firearms handling and hunting and afforded the opportunity to actively participate in the sport.

QUESTIONS FOR THE RECORD
U.S. House Committee on Science, Space, and Technology
Subcommittee on Investigations & Oversight

"The Science of How Hunting Assists Species Conservation and Management"

Tuesday, June 19, 2012
2:00pm to 4:00pm
2318 Rayburn House Office Building

Mr. Nick Wiley
Executive Director, Florida Fish and Wildlife Conservation Commission

Questions submitted by Dr. Paul Broun, Chairman

1. Does the current federal permitting system for hunting of endangered species make sense? How can it be improved? In place of the existing system, what permitting system for hunts of endangered species would you recommend?

   Mr. Wiley's Response
   The federal system that regulates the importation into the U.S. of wildlife species that are listed as threatened or endangered is valuable to ensure protection and persistence of the species. However, in the case of polar bears, with appropriate checks and balances, the system could and should allow for the importation of legally taken bears where the take is from populations documented to be thriving and is properly regulated to assure sustainability and effective enforcement. Enforcement is an important consideration, and mechanisms to prevent poaching would be critical. The economic benefit that hunting of polar bears brings to some native communities is a driver that allows the communities to be partners in public awareness, management, and conservation. Therefore, the take of individual polar bears that are part of the current "harvestable surplus" can contribute to assuring the long-term viability of populations and the species.

2. How can the Endangered Species Act be improved to recognize the value of hunting to species conservation and management?

   Mr. Wiley's Response
   The ESA authority related to hunting could be improved so that it more clearly recognizes and accommodates, through an exemption to ESA prohibitions, the hunting of thriving populations of captive-bred animals, such as in the case of the scimitar-horned oryx, the dama gazelle, and the addax. These exemptions should be allowed when it is clear that this take has no effect on

wild populations of listed species in their native habitats, including when enforcement measures can assure no illegal impact on wild populations. It makes sense to allow differentiation between captive and wild populations of the listed species in determining status. Captive-breeding facilities can be important as a tool for enhancing survival of the species, and allowing hunting should be considered an acceptable means for keeping the captive-breeding operations viable. Hunting is an important action that generates funding necessary for management and husbandry of these populations to allow them to thrive. Solutions to allowing these operations to continue should be developed so that they are workable and efficient for the landowners and do not impose unnecessary requirements that make them infeasible.

○