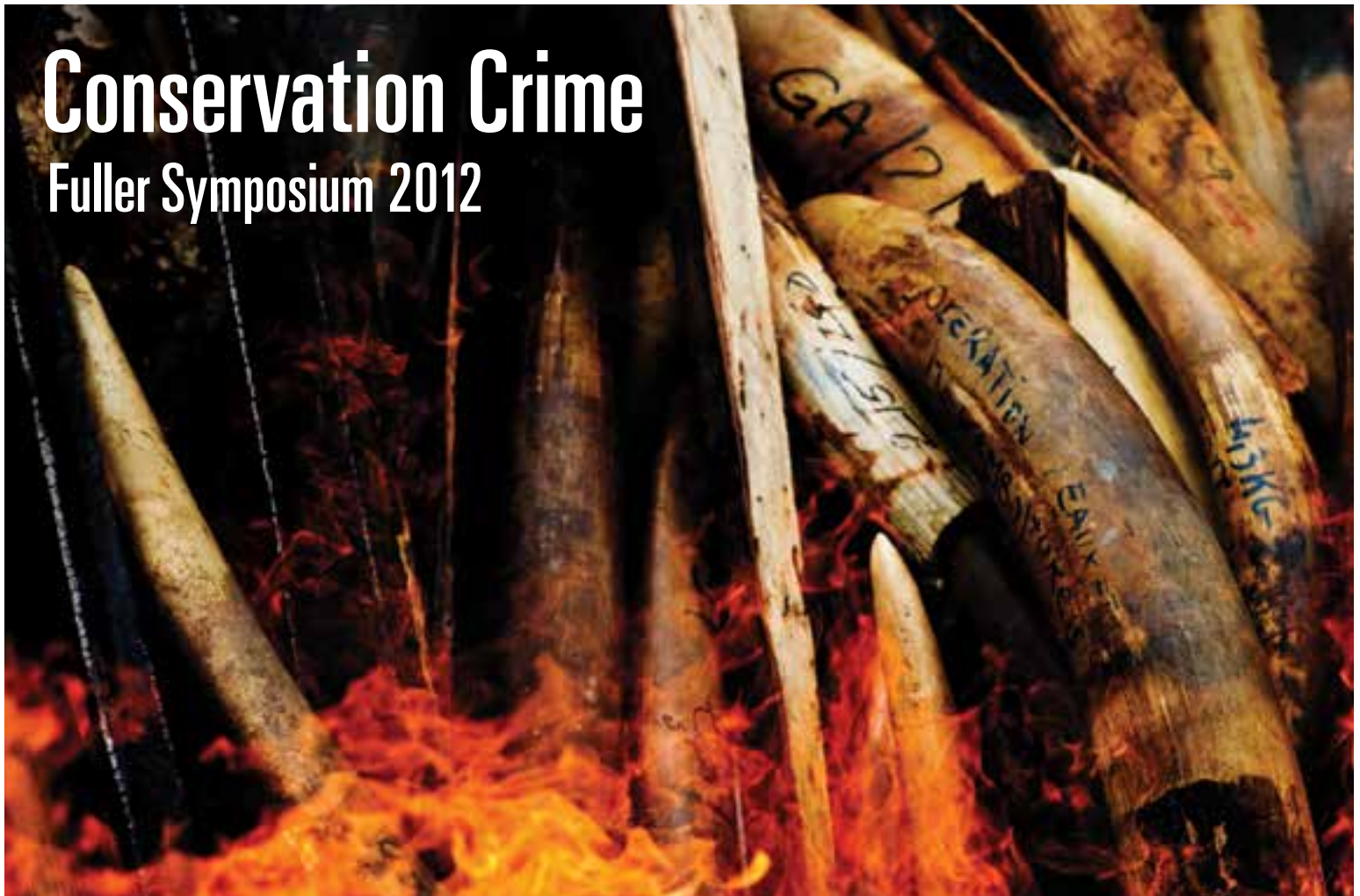


# Conservation Crime

Fuller Symposium 2012



**FULLERSYMPIOSIUM**  
Science for Nature



Welcome

# Conservation Crime

Welcome to World Wildlife Fund's 7th Annual Kathryn Fuller Science for Nature Symposium. This year, the Fuller Symposium explores the current crisis arising from the criminal exploitation of nature. The illegal killing, capture, and trade of wild species has escalated to the point where it could undo decades of conservation efforts. Scientific advancements, innovative technologies, and strengthened policy initiatives have the potential to turn the tide against the organized crime syndicates that are pushing many of our most iconic species toward extinction and placing local communities at risk. Global leaders will share their insights on the shape and scale of the crisis and on the most promising solutions for stemming it.

WWF is committed to science-based conservation, incorporating the latest research and innovation into our work. The annual Fuller Symposium informs the thinking of the public, private, and nonprofit sectors about key conservation issues of our time.

*WWF would like to thank the National Geographic Society for donating the use of their facilities for the 7th Annual Kathryn Fuller Science for Nature Symposium.*

# WWF's Kathryn Fuller Science for Nature Fund

In 2005, WWF established the Kathryn Fuller Science for Nature Fund in honor of our former president and CEO. In her 16 years as president, Kathryn Fuller helped expand the ties between conservation and science. In this tradition, we continue to expand our reach in connecting a range of scientific disciplines to conservation.

The Fuller Fund advances the role of science in conservation by bringing together key experts to tackle emerging conservation issues, providing a regular forum in which the conservation community can hear from the world's most influential scientists, and fostering the next generation of conservation science leaders.



The annual Kathryn Fuller Science for Nature Symposium convenes leading thinkers in science, policy, business and development to summarize “what we know, what we don’t know, and what we need to know” to effectively tackle emerging issues. The goals of the annual symposium are to (1) present the state of the science for a complex conservation issue; (2) provide a forum for rigorous debate, leading to an agreed conservation agenda going forward; and (3) inform leading scientists of what research topics would most powerfully support conservation work on this issue.

The Science for Nature Seminar Series has become a well-known forum in which distinguished and innovative scientists from around the world present their latest work as it relates to conservation. The seminars provide individuals from NGOs, government and the private sector the opportunity to learn from and network with one another.

The Fuller Fellowships have supported early-career scientists who are emerging leaders in their fields as they work on issues of exceptional relevance to conservation. Fellows improve their understanding of conservation by linking their doctoral and postdoctoral research to on-the-ground work and collaborating with the global network of WWF scientists and practitioners.



**Kathryn S. Fuller**

**Kathryn S. Fuller** | Smithsonian Institution  
National Museum of Natural History

Kathryn S. Fuller is currently chair of the Smithsonian's National Museum of Natural History and a managing partner in Doyle Property Partners. She was president and chief executive officer of World Wildlife Fund from 1989 to 2005, and now serves as president emerita. Prior to that, she was executive vice president, general counsel and director of WWF's programs in public policy and wildlife trade monitoring. Before joining WWF, she worked at the U.S. Department of Justice, first in the Office of Legal Counsel, then as a trial attorney in the Land and Natural Resources Division, where she helped create and later headed the Wildlife and Marine Resources Section.

Fuller received her BA in English and American literature from Brown University. She earned a law degree with honors from the University of Texas and pursued graduate studies in marine, estuarine and environmental science at the University of Maryland. She has conducted field work on wildebeest behavior and coral reef crustaceans. She serves on a number of boards, including those of Alcoa Inc., the Summit Foundation, the Robert Wood Johnson Foundation, and the Greater Himalayas Foundation.

# Agenda Wednesday, November 14, 2012

9:00 **WELCOME**

Marcia Marsh, *WWF-US*

## Session 1 The Big Picture of Conservation Crime

9:15 **INTRODUCTION**

Monica Medina, *U.S. Department of Defense*

### **Killed, Shipped and Sold: Dismantling Conservation Crime**

Crawford Allan, *WWF-US/TRAFFIC North America*

### **Conservation Crime: The National Security Dimensions**

Dr. Kent Butts, *Center for Strategic Leadership,  
U.S. Army War College*

10:00 **MODERATED DISCUSSION**

10:20 **BREAK**

## Session 2 Reducing Supply and Demand

10:50 **INTRODUCTION**

Dr. Meredith Gore, *School of Criminal Justice,  
Michigan State University*

### **Lives on the Line: Protection on the Ground in Africa's Oldest Park**

Innocent Mburanumwe, *Virunga National Park*

### **When the Buying Stops, the Killing Can Too: Ending the Demand for Endangered Species Products**

Peter Knights, *WildAid*

### **Think Like a Marketer: What Advertising Can Teach about Changing Consumer Behavior in Asia**

Eric Phu, *Marketing Consultant*

12:05 **MODERATED DISCUSSION**

12:30 **LUNCH BREAK**

### Session 3 Innovations

1:45 INTRODUCTION

Dr. Jon Hoekstra, *WWF-US*

#### **Wildlife Forensics: An Evolving Tool for Combating Wildlife Crime**

Ken Goddard, *National Fish & Wildlife Forensics Laboratory*

#### **Track, Identify and Control: New Technologies to Combat Illegal Trade of Forest Products**

Adam Grant, *World Resources Institute*

#### **A New Frontier in Tracking Conservation Crime: The Promise of Conservation Drones and Applications on the Ground**

Dr. Lian Pin Koh, *Department of Environmental Systems Science, ETH Zurich*

#### **Geospatial Technologies for Tracking and Reducing Conservation Crime**

Rebecca Moore, *Google Earth Outreach*

3:25 MODERATED DISCUSSION

3:50 BREAK

### Session 4 Policy Solutions

4:20 INTRODUCTION

GINETTE HEMLEY, *WWF-US*

#### **Boots, Science, and Policy: The Essential Trinity to Combat Wildlife Crime**

Dr. Elizabeth Bennett, *Wildlife Conservation Society*

#### **Wildlife Diplomacy in Action**

Under Secretary of State Robert Hormats,  
*U.S. Department of State*

5:20 CLOSING REMARKS

KATHRYN FULLER, *Smithsonian Institution National Museum of Natural History and Immediate Past President and CEO of WWF-US*





## Symposium Speakers



**Crawford Allan**



**Elizabeth Bennett**



**Kent Butts**

### **Crawford Allan** | WWF-US/TRAFFIC North America

Crawford Allan is regional director of TRAFFIC, the wildlife trade network and strategic alliance between WWF and IUCN, which has a mission to ensure that the trade in animals, plants, timber and fisheries is beneficial for conservation and people. Based with WWF-US in Washington, D.C., since 2005, he oversees efforts to leverage North American assets to protect wildlife globally from the negative aspects of wildlife trade. He has led TRAFFIC on international black market investigations and pushed for strong enforcement actions for more than a decade, during which time some of the largest seizures, major arrests and prosecutions have occurred. From 1995 to 2005, he was chairman of the United Kingdom's government Forensics Working Group of the Partnership for Action Against Wildlife Crime.

### **Elizabeth Bennett** | Wildlife Conservation Society

Dr. Elizabeth Bennett is vice president for species conservation at the Wildlife Conservation Society, where she oversees global species conservation programs. Born in the UK, she attended Nottingham University and earned her PhD for research on the ecology of primates in Peninsular Malaysia from Cambridge University. She has been recognized for her service to conservation and has earned several awards, including the Golden Ark

presented by Prince Bernhard of the Netherlands and the Member of the Order of the British Empire (MBE) presented by Her Majesty Queen Elizabeth II in 2005.

### **Kent Butts** | Center for Strategic Leadership, U.S. Army War College

Dr. Kent Butts is professor of political military strategy and the director of the National Security Issues Group at the Center for Strategic Leadership, U.S. Army War College. His research focuses on the role of natural resources in national security. He headed the U.S. delegation and cochaired the NATO Environmental Security Pilot Study Meetings in Warsaw and Prague, and was a member of the U.S. delegation to the OSCE Economic Forum. Dr. Butts participated in the 2011 Defense Science Board Climate Change and Security Study and is an author or editor of numerous publications, including the 2012 book, *Sustainability and National Security*. A graduate of the U.S. Military Academy, he holds an MA and PhD in geography from the University of Washington, and was a John M. Olin Post-Doctoral Fellow in National Security at the Center for International Affairs at Harvard University.



**Ken Goddard**



**Meredith Gore**



**Adam Grant**

**Ken Goddard** | National Fish & Wildlife Forensics Laboratory

Ken Goddard is director of the National Fish & Wildlife Forensics Laboratory. He began his law enforcement career as a deputy sheriff/criminalist working in Crime Science Identification (CSI) analyzing evidence for the Riverside and San Bernardino County crime labs in California. Goddard then moved to the Huntington Beach Police Department to establish a Scientific Investigation Bureau. In 1979, he joined the U.S. Fish & Wildlife Service to direct the first and only wildlife crime lab in the world. He has written many books, fiction and nonfiction, and advised for the television series *CSI*. He earned his BS in biochemistry at the University of California, Riverside, and his MS in criminalistics at California State University in Los Angeles.

**Meredith Gore** | Michigan State University

Dr. Meredith Gore is assistant professor in the School of Criminal Justice at Michigan State University. Her research interests include public perceptions of risk to and from wildlife. She also explores the sociocultural phenomena—such as mass media and conservation governance—that affect criminal human behaviors in conservation. Her work on conservation criminology aims to synergize collaborations among conservation, criminology and decision science using mixed scientific methods. To date, her work

has focused on Madagascar, Namibia, global white shark habitats, and the Great Lakes Basin. She received a BA in anthropology and environmental studies from Brandeis University, an MA in environment and resource policy from The George Washington University, and a PhD in natural resource policy and management from Cornell University.

**Adam Grant** | World Resources Institute

Adam Grant, a senior associate at World Resources Institute, manages WRI's Forest Legality Project, a new initiative to combat illegal logging through the creation of the Forest Legality Alliance. Before joining WRI, Grant worked in Southeast Asia to improve tropical forest management and responsible supply chain management. Based in Indonesia, he worked initially for the Rainforest Alliance's FSC SmartWood program and then as a consultant for major forest product producers trading throughout Asia and Europe. Prior to his work in Indonesia, Grant worked as a forest contractor and timber importer in Sweden, Finland and the UK. In China, he worked on projects related to poverty alleviation centered on natural resource management in Sichuan Province and in the Tibetan Autonomous Region.



**Ginette Hemley**



**Jon Hoekstra**



**Robert Hormats**

### **Ginette Hemley** | WWF-US

Ginette Hemley is senior vice president for conservation strategy and science at WWF-US. She oversees WWF's programs on conservation science, conservation finance, climate change, conservation leadership, campaigns, and program operations. She tracks execution of WWF-US's local-to-global strategy to conserve ecologically important places and leads advocacy campaigns to advance WWF's conservation agenda and protect endangered and threatened species. Her previous roles at WWF include managing vice president for conservation, vice president for species conservation, and director of TRAFFIC North America. Prior to joining WWF, Hemley worked for the U.S. Fish and Wildlife Service. She holds a BS in biology from the College of William and Mary, studied history and philosophy at Oxford University, and is an ELIAS Fellow at the Massachusetts Institute of Technology.

### **Jon Hoekstra** | WWF-US

As chief scientist and vice president, Jon Hoekstra leads WWF's Conservation Science Program and works with more than 400 WWF scientists to provide innovative research and technical assistance to conservation projects around the world. Since the beginning of his career as an endangered species biologist,

Hoekstra has been committed to using science to craft practical and effective conservation solutions. As a global science leader, he used science to reveal the biome crisis in the world's grasslands, revamped conservation strategies to adapt to climate change, and revealed how habitat protection and restoration can help people as well as nature.

### **Under Secretary of State Robert Hormats** |

#### **U.S. Department of State**

Dr. Robert Hormats is the under secretary of economic growth, energy, and the environment. Under Secretary Hormats was formerly vice chairman of Goldman Sachs (International). He served as assistant secretary of state for economic and business affairs from 1981 to 1982, ambassador and deputy U.S. trade representative from 1979 to 1981, and senior deputy assistant secretary for economic and business affairs from 1977 to 1979. He earned his PhD in international economics from the Fletcher School of Law and Diplomacy and his publications include *The Price of Liberty: Paying for America's Wars from the Revolution to the War on Terror*; *Abraham Lincoln and the Global Economy*; *American Albatross: The Foreign Debt Dilemma*; and *Reforming the International Monetary System*.



**Peter Knights**



**Lian Pin Koh**



**Marcia Marsh**

### **Peter Knights** | WildAid

Peter Knights was formerly a program director working on illegal wildlife trade with Global Survival Network and a senior investigator for the Environmental Investigation Agency. He specialized in conducting global on-site investigations and campaigned against the trade in wild birds for pets and the consumption of endangered species in traditional Chinese medicine. In 1996 he created the Active Conservation Awareness Program, the first international program aimed at reducing demand for endangered species products. The program used sophisticated advertising techniques, and donated airtime and celebrity spokespeople with the message, “When the buying stops, the killing can, too.” This work earned him an Associate Laureate of the Rolex Award for Enterprise. Knights holds a BSc in economics from the London School of Economics.

### **Lian Pin Koh** | Department of Environmental Systems Science, ETH Zurich

Dr. Lian Pin Koh is assistant professor of applied ecology and conservation at the ETH Zürich (Swiss Federal Institute of Technology). He researches emerging environmental and socioeconomic challenges facing tropical developing nations, including intensifying land-use conflicts, carbon emissions

from land-use change and forestry, and threats to natural ecosystems and wildlife. He employs a variety of scientific approaches to his work, including field surveys and experiments, and theoretical and computer simulation models. He also develops and implements innovative approaches to data collection and developing science-based decision-support tools for land-use decision makers, including ConservationDrones.org, REDDCalculator.com, SpeciesExtinctionCalculator.com, LandUseCalculator.com, and DeforLeaks.org.

### **Marcia Marsh** | WWF-US

As chief operating officer, Marcia Marsh oversees the execution of WWF’s strategy, guiding the organization’s work in policy, markets and field conservation and resolving complex business problems. She is also WWF’s executive lead for the CARE-WWF Alliance, a partnership addressing the linkages between poverty and environmental degradation. Marsh serves on the Governing Committee of the Natural Capital Project, a partnership among Stanford University, The Nature Conservancy and WWF to transform institutional and market decision-making using ecosystem services. She is also responsible for the performance of critical operating systems, including human resources, finance and IT, which support the work of more than 800 employees in



**Innocent Mburanumwe**



**Monica Medina**



**Rebecca Moore**

the U.S. and abroad. She has 26 years of general business and human capital consulting experience focusing on helping complex organizations achieve their business strategies.

### **Innocent Mburanumwe** | **Virunga National Park**

Innocent Mburanumwe is the warden in charge of the Southern Sector of Virunga National Park in the Democratic Republic of Congo. The Southern Sector includes the Mikeno Sector and is home to about 200 mountain gorillas. As the sector warden, Mburanumwe is responsible for identifying, tracking, and protecting the gorillas, as well as the sector borders. Mburanumwe is the son of a ranger. Since 1997, he has been a ranger at Virunga, where he pursued paramilitary training. He conducted wildlife patrol assignments at several posts, and later was made the warden in charge of identification of gorillas in the Mikeno Sector. Mburanumwe knows the habituated mountain gorillas well and can identify most by their noses and faces.

### **Monica Medina** | **U.S. Department of Defense**

Monica Medina was appointed to the Senior Executive Service of the Department of Defense in May. She advises the secretary on key priorities, including energy efficiency and environmental policy, women in the military, and the transition of veterans into civilian

life. Medina joined DOD from the Department of Commerce, where she served as the principal deputy undersecretary for oceans and atmosphere of NOAA. She also served as the U.S. Commissioner to the International Whaling Commission. Prior to joining the Obama administration, Medina served as a senior officer in the Pew Environment Group, and as a partner at the law firm of Heller Ehrman White & McAuliffe. She held a number of positions in the Clinton administration and on Capitol Hill, and began her legal career as a captain in the Army.

*The opinions shared today by Monica Medina are her own.*

### **Rebecca Moore** | **Google Earth Outreach**

Rebecca Moore is a computer scientist and longtime software professional. At Google, she conceived and leads the Google Earth Outreach program, which supports nonprofits, communities and indigenous peoples around the world in applying Google's mapping tools to the world's pressing problems in areas such as environmental conservation, human rights and cultural preservation. Moore also initiated and leads the development of Google Earth Engine, a new technology platform that supports global-scale monitoring and protection of the Earth's environment. She received a bachelor's degree with honors from Brown University in artificial intelligence and a master's degree from



**Eric Phu**

Stanford University. Her personal work using Google Earth was instrumental in stopping the logging of more than a thousand acres of redwoods in her Santa Cruz Mountain community.

### **Eric Phu | Marketing Consultant**

Eric Phu has worked in the marketing field since 1996, most recently as vice president for Tribal DDB Greater China. He has advised companies including Sony, IBM, Intel, Procter & Gamble, Unilever, Tourism Australia, McDonald's and Volkswagen on their advertising and communications strategies across the Asia Pacific. As a digital marketing specialist, Phu has won numerous international awards for his advertising campaigns combining technology, data-driven insights, and creativity to drive business solutions. He has also been an active member of the advertising community, having served as vice chairman of the Hong Kong industry's Digital Committee and as head lecturer for the Advertising Federation of Australia's AdSchool Course at the University of Technology, Sydney.

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WWF is in the midst of a global campaign to stop wildlife crime. To learn about what we are doing, visit

[worldwildlife.org/wildlifecrime](http://worldwildlife.org/wildlifecrime)



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