

Global Tiger Initiative
Conservation and Development Network

On the road to saving tigers...

July 28, 2010

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Introduction

On June 1st, 2010, twenty-five conservation biologists from six south Asian countries and Russia convened at the Smithsonian Conservation Biology Institute (SCBI) in Front Royal, Virginia to take part in a two-week Training of Trainers course to address the challenges of saving the world’s dwindling population of wild tigers.

The course was a follow-up to a six-week program held in India in February/ March, that, together with the one-week Executive Leadership Forum held in Washington, DC in April, constitute the first capacity building training initiatives of the Global Tiger Initiative, a strategic partnership between the Smithsonian Institution, World Bank and a number of international conservation partner organizations dedicated to conserving the world’s last 3,200 wild tigers. The participants studied practical aspects of tiger conservation, such as conservation field-craft, biodiversity monitoring and assessment and methods of reducing poaching and human-wildlife conflict.

During their two weeks in the United States, the participants, who are from Bhutan, Nepal, Bangladesh, India, Malaysia, Thailand and Russia, visited governmental agencies and non-governmental organizations in the Washington, DC area where they consulted with a variety of experts about such critical tiger conservation subjects as conservation economics, illegal wildlife trafficking, smart (or “green”) infrastructure development, park and protected area management, community development and human-wildlife conflict. Participants also worked with experts to develop funding proposals for future tiger conservation projects in their home countries.

During the first week in the US, participants renewed acquaintances, reported on their activities in the interval since the conclusion of the workshop in India, learned about the latest developments in conservation economics and finance with World Bank economists. They also observed anti-wildlife trafficking and law enforcement activities at the US Customs port-of-entry facility at the Thurgood Marshall Baltimore-Washington International Airport, and fine-tuned plans to undertake their own tiger conservation training programs subsequent to returning to their home countries. Participants met with Smithsonian scientists, toured the 3,400 acre SCBI research and conservation facility in Front Royal, Virginia, where they were also staying, and enjoyed a day at leisure in the nation’s capital viewing museums, monuments and other sights of interest.

In the second week, participants visited the Shenandoah National Park where they consulted with park staff on park management, community relations and organization structure. They discussed wildlife monitoring and assessment, habitat restoration techniques and community involvement with SCBI biologists and staff from the Virginia Department of Game and Inland Fisheries and Conservation International. Much of the second week was also devoted to the preparation and presentation of funding proposals for collaborative projects that will be conducted in tiger range countries after the course in completed.



Main Entrance Smithsonian National Zoo



Entrance to SCBI's Front Royal campus

A Day at the World Bank



World Bank, Washington, D.C.

Following the initial orientation day, participants traveled to Washington, D.C. where they met with and heard presentations from World Bank staff. In his address to participants, Keshav Varma of the World Bank cited several critical factors responsible for the decline in the wild population of tigers, among them the rapid increase in the human population in tiger range countries, increased development pressure on the environment, and a steep increase in poaching driven by surging demand for tiger parts in China. “The outside world doesn’t know,” Varma said, “and we are counting on you to tell them.” He encouraged the participants to disseminate information about their tiger conservation activities, to promote and support wildlife-friendly “smart” infrastructure development wherever feasible, and to become agents for positive change in whatever capacity they were working. “Management is the key,” Varma told those assembled, “and you are the future of tiger conservation.”



Keshav Varma addresses participants

John Reid, Founder and President of the Conservation Strategy Fund, introduced the participants to the emerging discipline of conservation economics and discussed with them ways to use economics and strategic analysis to conserve biodiversity. In his presentation, Dr. Reid reviewed basic market-based economic concepts, focusing on the relationship between supply and demand, cost-benefit analysis, and the valuation of goods and services. Using these as a conceptual foundation, Reid then explored with participants the idea of ecological valuation emphasizing the challenges inherent in estimating environmental costs and benefits in terms that would command the attention of policy makers and planners. Reid demonstrated several analytical tools that conservationists could easily use to frame economic arguments in terms that decision-makers would view as credible and worthy of attention. He also conducted an exercise that demonstrated to participants how a set of focused actions could reduce the supply and demand for tiger products in the current illegal market environment.



Juan Quintero, World Bank

Juan Quintero (World Bank), an engineer who has spent much of the last 30 years assessing the impact of infrastructure development on environments and societies in developing countries, also addressed the participants. Quintero said that the greatest threat to tiger populations in the medium- to long-term is continued fragmentation of the remaining islands of tiger habitat. Trillions of dollars will be invested in infrastructure development in Southeast Asia over the next decade, he explained, while participants viewed a map showing the amorphous maze of highways, dams and mining concessions proposed for the region. Quintero forcefully argued that better coordination must occur among the policy, sector and project levels if tigers and their habitats are to withstand the inevitable developmental onslaught. He also proposed that a pragmatic, eco-friendly paradigm for tiger conservation might take the form of a sliding scale of strategic responses to increasingly intensive development actions, an approach he summed up as: “avoid, mitigate, rectify, compensate”.

Experts believe that an unprecedented level of tiger poaching, which is feeding the burgeoning illegal trade in tiger parts largely for the Chinese traditional medicines market, is the most immediate threat to the remaining 3,200 wild tigers. These demand-supply pressures have brought the fate of wild tigers to a critical juncture with one very possible scenario being their total extinction within a decade. This dire prospect has prompted many involved in tiger conservation to push hard for collaborative international efforts to upgrade and intensify on-the-ground surveillance, law enforcement and anti-crime intelligence gathering efforts in the 13 tiger range countries and in other countries serving as distribution and through-points for illegal tiger products.

Wildlife Inspection, Illegal Trafficking and Trade

With the dual threats of poaching and illicit demand fresh on their minds, participants eagerly anticipated a field trip to the US Fish and Wildlife Service wildlife inspection station at the Thurgood Marshall Baltimore-Washington International Airport (BWI) where they observed firsthand how international wildlife shipments are monitored and inspected at a major US port-of-entry. During their full day at BWI, participants examined a wide range of wildlife contraband, took part in the inspection of an international commercial shipment of wildlife parts, and engaged in stimulating discussions on a variety of legal and trade topics with wildlife and customs field agents, SCBI staff and a TRAFFIC representative who is an expert in international wildlife trade.



Cathy Cockey inspecting imported wildlife products

Marshall Jones, SCBI Senior Conservation Advisor spoke to the group about the sometimes confusing and porous mosaic of US and international wildlife trade laws and the challenges of implementing them. Cathy Cockey USFWS Wildlife Inspector and Special Agent Bruce Angler demonstrated wildlife identification and inspection techniques and discussed how civil and criminal wildlife trade violations are detected and prosecuted in the US and the challenges of monitoring a huge and growing volume of international cargo. Crawford Allen, WWF-TRAFFIC, discussed a wide range of international wildlife trade issues including the most controversial and vigorously debated topic of the day: how an uncoordinated patchwork of national and state laws has resulted in there being more tigers in private hands – legally - in the United States than exist in the wild in all 13 tiger range countries combined. Although there is no evidence as yet that any US tigers had entered the illegal trade in tiger parts, Allen explained, the financial incentive is there, especially for marginal operators who find themselves with a surplus of tigers they can no longer afford to keep. The sobering realization that the US is a significant potential reservoir of material that could enter the illegal international tiger trade provided participants much food for thought.

Training Future Trainers



Class session with Jennifer Sevin

TOT participants have committed to pursuing new tiger conservation initiatives and to sharing with others the knowledge and experiences gained individually and collectively during the course. They have also committed to maintaining the collegial, collaborative relationships and friendships developed through time and experiences shared over the eight weeks of the course via an active community of practice network comprised of all current and future TOT course alumni, instructors and advisors. To help facilitate these next steps, Jennifer Sevin of SCBI devoted a day to leading participants through a series of exercises designed to help them develop research and training project proposals, determine audiences for future training and outreach efforts, conduct needs assessments and gap analyses for capacity building and training activities, and determine priority and feasible outcomes and evaluate outputs for their future conservation activities.

Human-Wildlife Conflict



Problem black bear

Conflict is an inevitable part of most human endeavors and tiger conservation is no exception. In the world of tiger conservation, the potential for conflict exists at many levels whether it is between nations, ethnic groups, socio-economic interests, philosophical persuasions, levels in an organizational hierarchy or individuals. Because the potential for conflict is omnipresent, tiger conservationist - indeed all conservationists - must become adept at recognizing and analyzing conflict and in redirecting its negative energy to the benefit of wild tigers and the environments in which they live. But few conservationists have the requisite skills and almost none include conflict management in their professional training. Rectifying the status quo was the central thesis of a conflict management workshop conducted at SCBI by Francine Madden of the Human Wildlife Conflict Center.



Conflict resolution with Francine Madden

In a lively half-day session, Madden led participants through a series of discussions and exercises that helped them recognize and understand the different levels of conflict and its underlying causes. Conflict will occur whenever differences in opinion or objectives exist, she explained, but if properly managed, conflict's energy can be channeled to constructive outcomes. The key, said Madden, lies in creating a process of trust, openness and respect that enables parties to express their views and feel they have been heard. Such a process can foster the personal relationships crucial to enabling conflicting parties to seek common ground and arrive at collaborative solutions to substantive issues. Madden also coached participants in useful tools for successful conflict resolution including: active listening, expressing empathy and respect for others, asking sincere questions and opinions, soliciting help, and the use of symbolic gestures.



Controversial top predator

Gina Schrader discussed with participants the Defenders of Wildlife's compensation and mitigation programs for the gray wolf in the northern Rocky Mountains, an area where the species has come into conflict with ranchers and farmers through livestock depredation. Defenders' grey wolf conservation strategy, which has evolved over 35 years of on-the-ground action, involves a combination of advocacy for legal protection, proactive engagement of ranchers, mediation of human-wolf conflict, public education, and advancement of sound scientific and economic programs for wolf conservation. Schrader focused her presentation on the work Defenders has undertaken to reduce and mitigate human-wolf conflict. She described Defenders' Proactive Carnivore Conservation Fund, which supports projects that decrease human-predator conflict, reduce unnecessary killing and increase public tolerance of predators. Schrader also discussed a recently published guide for livestock owners containing management tools to help them reduce predator impact, and the Wolf Compensation Trust, a donor-financed fund that helps to eliminate a major factor in political opposition to wolf recovery by transferring the economic burden of livestock depredation from ranchers and farmers to those who support wolf reintroduction.

Tiger Conservation Panel & Book Signing



Public forum at the zoo

At approximately the halfway point in the Training of Trainers program, participants took part in a public forum at the National Zoo at which a representative from each attending country gave a presentation about his country's tiger action plan and fielded public questions in a follow-up panel discussion. An audience of about 250 people listened to the country presentations, which were preceded by opening remarks from Steve Monfort, Hemanta Mishra, John Seidensticker and Yadvenradev Jhala who emphasized the critical state of tiger conservation and the need for urgent action. The event concluded with a book-signing by Hemanta Mishra whose newly published *Bones of the Tiger* is an autobiographical account of his four decade-long quest to save the tigers of Nepal.

Prior to the public forum, participants met at the National Zoo in small groups with technical advisors (Fred Bagley, Steve Monfort, Joe Kolowski, John Seidensticker) to discuss and refine their project proposals, which they presented at the end of the TOT program.

Shenandoah National Park



The start of a pleasant day

The day after the public forum at the National Zoo, participants embarked on a field trip to Shenandoah National Park (SNP) where they traveled some 50 miles of the Skyline Drive, in dramatic weather. Along the way they met with SNP staff at park headquarters and visitors' centers. Tim Taglauer, park interpretive specialist, oriented participants to the park landscape and gave an overview of park history, the major public and wildlife programs currently in place and how SNP interacts with the community within which it is embedded. After lunch in one of SNP's beautiful picnic groves, participants met at park headquarters with Gordon Olson, superintendent SNP, and Peter Webster, Deputy Chief Ranger. Olson discussed his personal history of advancement within the National Park System, the history of the System and SNP, the statutory framework within which America's national parks operate, and the many logistical, organizational, financial



A lush Shenandoah forest

and biological challenges of running a national park near a major metropolitan area. Webster discussed SNP's role in law enforcement as having three primary goals: 1) Protecting the park from human impact; 2) protecting people from people; (3 protecting people from the park.

Marshall Jones, SCBI Senior Conservation Advisor, gave an informative presentation on the land management mandates and practices of the National Wildlife Refuge, National Park Service and the US Forest Service. Unlike protected areas in most tiger range countries, areas managed by these agencies do not contain human settlements, although this wasn't always the case. Jones also gave an excellent overview of the U.S. Endangered Species Act, which he considers the strongest conservation act in the world, and the politics of formally listing endangered or threatened species. He concluded with a summary of the latest landscape-level conservation initiatives of the USFWS and USGS.

Species and Habitat Management



In the field with Bill McShea

Bill McShea, SCBI staff ecologist, gave participants a very dynamic presentation on Smithsonian ecological field studies of bears and giant pandas in China. The scientific backbone of these long-term studies are the biological assessments of wildlife and their habitat using field methodologies participants studied in the field during the first part of the TOT course in India. McShea discussed with participants the pros and cons of various sampling techniques emphasizing the greater reliability of distance sampling and presence/absence estimates over absolute counts and other population estimation methods. McShea also described the human community surveys conducted during these projects and how they have brought an added dimension to his wildlife studies. Community surveys, McShea explained, can be a useful tool for determining where wildlife is and has been in the past and an important gauge of public attitudes toward wildlife. The surveys have also been helpful detecting human-wildlife conflict issues and garnering suggestions for possible solutions from those most directly affected.



Big-Bluestem, a native grass

Following his presentations on field projects and techniques, McShea took participants into tick and poison ivy infested grasslands and hay fields on the SCBI property where he discussed SCBI efforts to restore native vegetation to the landscape, remove invasive species and to restore native grass species as commercial substitutes for traditional fodder crops (e.g., alfalfa and timothy hays). He explained efforts to involve the local community, especially farmers and graziers, in these restoration programs and how they might derive future benefit from using native grass species as livestock fodder because of their superior efficiency in terms of productivity, cropping and greater drought and disease resistance.



Prime Virginia farmland

David Kocka, a biologist at the Virginia Department of Game and Inland Fisheries (VDGIF), spoke to the participants about state versus federal wildlife responsibilities, the history of wildlife management practices in Virginia and the laws and regulations related to protection and taking of wildlife. He also discussed enforcement of wildlife laws and penalties for violations, and how the sometime conflicting demands of wildlife conservation, hunting, recreation and development are addressed in the state of Virginia. Kocka discussed in detail VDGIF's process for developing management plans for high profile game species such as deer and black bear. Developing these plans involves a long process of collecting biological data on distribution, abundance and harvest and significant input from communities throughout the state on a variety of issues including: human-wildlife conflict; the impact of wildlife on business and recreation; and the desired abundance of wildlife in and around developed areas and communities. Kocka also described how VDGIF public outreach programs are designed to educate citizens in how to reduce human-wildlife conflict and how to take advantage of the state's ongoing programs for responding to wildlife problems. He described the process as one that involves all interested stakeholders to the maximum extent possible with the state responsible for technical decisions and the public providing input to make value decisions (i.e., the benefits versus costs of wildlife).



Sarah Banks, Conservation International

Sarah Banks of Conservation International engaged participants in a discussion of CI's community development projects in southern Africa. These projects have been designed to help indigenous people determine the desired levels of stock, land and predator management on community lands and to generate revenue streams from domestic cattle production, ecotourism and wildlife management. CI's process depends on full community participation in decision-making and broad community involvement in the outputs and benefits. The outcomes of CI's approach include the creation of new businesses and jobs, job training and the conservation of thousands of hectares of biologically rich land. Banks helped participants apply a needs assessment process to issues of interest to tiger conservation. In the second half of this session, Nalini Mohan spoke on Wildlife Conservation Society outreach and education projects and shared with participants an excellent document: "Teachers for Tigers: An educator's tool kit for saving the world's greatest cat."



A new role for zoo tigers?

Stephen J. O'Brien and graduate student, Carlos Driscoll concluded the formal TOT instructor presentations with talks on the genetics of tiger conservation and the evolutionary origin of the extinct Caspian tiger, respectively. O'Brien described Verified Subspecies Analysis (VSA) an analytical tool that uses genetic data to verify subspecies designations and determine the genetic purity of captive tigers. O'Brien and Driscoll believe VSA can legitimize the use of some captive tigers in recovery efforts and proposed a novel plan to place captive tigers with pure genetic pedigrees into former range countries. They provided as an example the reintroduction of Amur tigers, a subspecies genetically indistinguishable from the extinct Caspian tiger, to areas in the Caspian tiger's former range.

Conclusion, But Not The End ...



TOT participants and instructors

On the concluding day of the TOT, participants traveled to the National Zoo where the project groups presented their final proposals to their peers and advisors. The proposals (see project titles below) focused largely on trans-border and trans-boundary activities, monitoring, and the use of the recently developed MSTriPES performance assessment software package that includes: a) field-based protocols for patrolling, law enforcement, recording wildlife crimes and ecological monitoring, and b) customized software for data storage, retrieval, analysis and reporting. All the proposals were highly collaborative in nature and, if undertaken, will involve participants in continuing collaborative activities that will be a cornerstone of the TOT community of practice.

Project Proposals

- Monitoring the Status of Tigers and Associated Prey in the Indo-Bangladesh Sunderbans Landscape – A Trans-border Initiative. S. P. Yadav, India, N. S. Dungriyal, India, Ms. Poonam Dhanwatey, India, Md. Mozaharul Islam, Bangladesh, and Md. Rezaul Karim Chowdhury, Bangladesh.
- A Trans-border Monitoring Initiative for Tiger and Rhinoceros Conservation in the Terai Arc Landscape. S. Prasad, India, M. Pariwakam, India, R. Maharjan, Nepal, B. Ram Lamichhane, Nepal, M. Khadka, Nepal, and T. Silwal, Nepal (Total - US\$342,835; needed US\$89,660).
- Development of a Tiger Monitoring Protocol and Capacity Building of Staff. N. Wangchuk, Bhutan, P. Dendup, Bhutan, S. Lhamo, Bhutan, K. Lham, Bhutan (US\$160,109).
- Implementation of monitoring system for tiger and its habitat in Nagarjuna Sagar Srisailem Tiger Reserve, India by A. K. Naik, India, F. A. Khudsar, India and N. Dharaiya, India (US\$75,000; needed \$0).
- Ensuring the Future of the Tiger in the Manas Landscape Through Effective Monitoring – A Trans-boundary Initiative. A. Swargowari, India, S. Wangdi, Bhutan, A. Sharma, India, and J. Vattakaven, India (US\$219,511; needed US\$81,358).



Certificate recipients Naik and Lhamo

Following project presentations, participants toured the Veterinary Hospital and the Lion/Tiger facility and concluded the day, and the TOT program, with a closing ceremony that featured valedictory and farewell speeches by participants, hosts and instructors, the awarding of certificates and a relaxing dinner at the zoo's picnic pavilion.

*The Global Tiger Initiative
Conservation Development Network (GTI-CDN)*

The GTI-CDN facilitates strategic collaboration among national and international partners and provides conservation leaders and policy makers with the advanced knowledge, tools and skill sets required for implementing effective conservation strategies. The GTI-CDN facilitates collaboration among stakeholders in tiger range countries who seek to strengthen the capacity of individuals and institutions focused on the conservation of wild tigers, their prey and their natural habitats.

The Center for Conservation Education and Sustainability (CCES)

CCES is part of the Smithsonian Conservation Biology Institute (SCBI) and is dedicated to studying and understanding the complex relationship among biodiversity, people, and the environment, and to train the next generation of conservation practitioners. CCES is implementing the GTI CDN with multiple national and international partners. CCES offers professional training and certificate programs in conservation and has an academic partnership with George Mason University in conservation studies. CCES sustainability and conservation programs develop innovative and strategic partnerships, facilitate biodiversity monitoring networks, and work with conservation and development stakeholders to integrate biodiversity conservation into sustainable development.

Training of Trainers Course

Along with a one-week Executive Leadership Forum held in Washington, DC in April, 2010 the “Training of Trainers” course (TOT) constitutes the first capacity building training initiatives of the Global Tiger Initiative, a strategic partnership between the Smithsonian Institution, World Bank and a number of international conservation partner organizations dedicated to conserving the world’s last 3,200 wild tigers.

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