

## CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

<b>Organization Legal Name:</b>	Wildlife Conservation Society
<b>Project Title:</b>	Strengthening capacity for wildlife product identification in Indochina
<b>Date of Report:</b>	May 15, 2012
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**CEPF Region:** Indochina (Indo-Burma)

**Strategic Direction:** 1.6. Publish local-language reference materials on globally threatened species

**Grant Amount:** \$19,762.57

**Project Dates:** 2010/11/15–2012/5/15

**Implementation Partners for this Project (please explain the level of involvement for each partner):**

- CRES (Centre of Resources and Environments Study – CITES Scientific Agency): technical support and inputs to the website content, ID service protocol development, liaison with other CITES scientific agencies.

### Conservation Impacts

***Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.***

Many of the CEPF priority species are threatened by overexploitation to supply demand from the wildlife trade yet rarely will they be found as a whole animal. The local language wildlife product guide books will help law enforcement agencies both in Indochina and internationally, to identify products in trade and increase interception and successful prosecutions. Traditional training programs have failed to install species identification knowledge to Vietnamese law enforcement agencies. This website and rapid identification service is an innovative and pioneering approach for Vietnam and will help bridge their gap in knowledge to aid further criminal prosecutions, and monitoring.

**Component 1: Publication of local language identification guide to wildlife products**

**Expected results:**

The publication of an improved and expanded version of the commonly traded product identification guide previously published in Vietnam, in Laotian, Khmer, and Thai language.

**Actual results:**

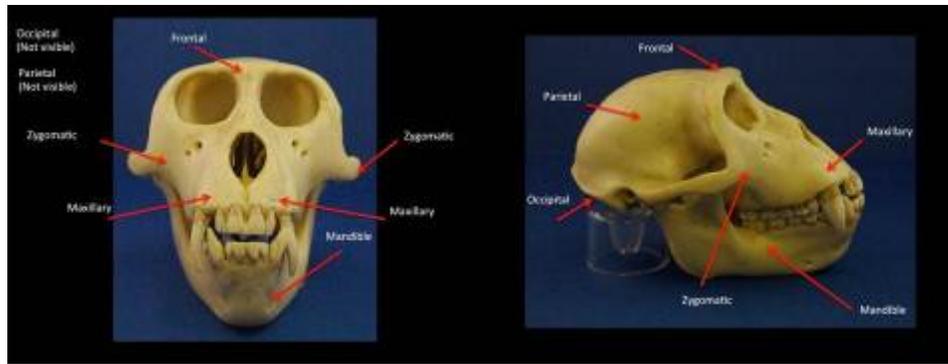
Through working with WCS offices in Laos, Cambodia, and Thailand, we identified products and species which should be added to the first (Vietnamese) edition of the guide, in order to make it more applicable to the trade situation in these countries. Additionally, we took this as an opportunity to review the content of the first edition of the guide, and identify areas that could be improved.



Figure 1: Front covers of Khmer (left), Thai (center), and Lao (right) version of the guide.

New entries for the products and species through this consultation process were then drafted by WCS staff, and reviewed by species experts, both in Vietnam, and internationally. New images were sourced from a variety of sources, including WCS collections, and the personal collections of species experts. Experts consulted included Bert Covert (skull identification), Brian Horne (turtles and crocodiles), Dwi Adhiasto (Maleo and Cassowary eggs), EJ Milner-Gulland (saiga antelope), John Polisar (leopards and jaguars), Jonathan O'Brien (skull identification), Luke Hunter (lions and tigers), Peter Zahler (ungulates), Rob Timmins (muntjacs), Simon Hedges (elephants), Steve Platt (crocodiles), Tim McCormack (turtles), and Zhang Mingxia (saiga antelope).

The guide is designed to maximize its usefulness in the field. The content is structured by 'part' or 'product type', making it much quicker and easier to use than a guide of similar content, arranged simply by species e.g. a law enforcement officer seeking to identify a skull can simply turn to the skulls chapter, where they will find a short text and diagrams explaining the key features of a skull, and some examples of commonly traded primate, felid, ungulate, and crocodile skulls.



**Figure 2: Diagram introducing key 'landmarks' for skull identification.**

Similarly, an officer seeking to identify a felid skin, will find several examples of the skins of different species, and text and images clarifying the differences between key species (such as leopard, jaguar, clouded leopard, and marbled cat).

**Clouded leopard (*Narcoleus nebulosus*)**

- Pale light brown to orange, with irregular large dark patches on the coat resembling a cloud pattern (dark blotches outlined by black margins)
- Stomach and inside of legs white or pale leucis
- Smaller white spots on legs and head
- Cheeks and neck with black stripes
- Tail marked with dark rings




Photo 17: Clouded leopard      Photo 18: Clouded leopard skin

**Asian golden cat (*Panthera tigris*)**

- Flanks black and white stripes on the head are distinctive, white stomach and inside of legs often with dark spots
- White underside of tail on the last third grey and black tip on the upper side
- Mostly found with a plain red-golden coat but variable and can be golden brown to greyish with some individuals dark brown. However, there is a rare variant that is spotted.



Photo 19: Asian golden cat



Photo 20: The three main variants of Asian golden cat also include pattern

**Marbled cat (*Panthera maritima*)**

- Distinct colouration to clouded leopard but marbled cat has less distinct irregular blotches which blend together in a marbled pattern
- Black spots on the legs are smaller and more numerous than clouded leopard
- Very long bushy tail, under parts grey or cream white with solid black spots
- Head has one black stripe running from the outer margin of each eye, two black stripes on the cheeks and spots on the forehead




Photo 21: Marbled cat      Photo 22: Marbled cat skin

**Jungle cat (*Felis chaus*)**

- Grey to yellowish coat with some black markings on the legs and tail with dark rings around the tip
- No stripes or spots on the body
- Ears are tall and pointed with black tufts on the top
- Similar to Asian golden cat but it does not have underside to tail and has stripes on the forehead and cheeks



Photo 23: Jungle cat

**Figure 3: Pages introducing key skin differences between a selection of felid species.**

In tackling illegal wildlife trade, law enforcement officers will frequently be presented with manufactured substitutes for wildlife products. The correct identification of 'fake' and 'real' products is therefore of crucial importance. This identification guide addresses this issue by giving examples of commonly traded substitutes, and suggesting methods for their identification. For example, elephant ivory may be faked using bone, inorganic materials, pig tusks, hippopotamus canines, deer antlers, or mammoth ivory. The guide points out diagnostic differences between these materials.

#### Identifying elephant ivory from manufactured substitutes

Manufactured ivory substitutes are usually made from a composite of an organic base and an inorganic material (e.g. polycrystalline composites of resin and resin or composites of ivory substitute with resin). Long-wave ultraviolet (UV) light is the best technique to identify if the suspect material is a manufactured substitute. Under UV light, ivory has a white/blue fluorescent appearance while manufactured substitute shows none of the light and thus is a dull blue/green color. Upon examination of the cross sections, manufactured substitutes lack the diagnostic Schreger lines that are found in elephant ivory.



Photo 1. Elephant ivory (left) and ivory plastic substitute (right) under UV light

#### Identifying elephant ivory from Mammoth ivory

Elephant ivory can be distinguished from mammoth ivory by photographing a cross-section of the ivory and measuring the angles of the outer Schreger lines running through the teeth. Mammoth ivory has a acute angles (<90 degrees) while elephant ivory has obtuse angles (>90 degrees). Multiple specimens may also be placed under UV light on mammoth ivory but tests on elephant ivory.



Photo 4. Cross-section of mammoth ivory

Photo 5. Cross-section of elephant ivory

#### Identifying elephant ivory from bone

Use a 10x hand lens to look closely at the surface of the suspected ivory product. Palmated bone has characteristic 'Haversian canals' which may often be discovered by organic material. Upon examination of the cross sections, bone lacks the diagnostic Schreger lines that are found in elephant ivory.



Photo 6. Bone inspected to test the elephant ivory



Photo 7. Cross-section of elephant ivory

#### Identifying elephant ivory from deer antlers

Antlers are more porous and porous than bone and display little or no trace of longitudinal growth. Inspection of the cross-section with a pocket knife reveals irregular holes and a spongy interior if the specimen is made from antlers. Upon examination of the cross sections, antlers lack the diagnostic Schreger lines that are found in elephant ivory.



Photo 8. Cross-section of deer antler

#### Identifying elephant ivory from canine teeth

Canine teeth of large cats have one or more grooves running down the side of the crown, not found in elephant teeth. Bear canines have the crown edge around the tip of the eye which are also present from elephant ivory. Upon examination of the cross sections, canine teeth lack the diagnostic Schreger lines that are found in elephant ivory.



Photo 9. Tiger canine



Photo 10. Bear canine

**Figure 4. Pages giving instruction on the identification of real elephant ivory from commonly traded substitutes**

The aim of these local language guides is to provide simple and practical tools for field officers in the rapid and accurate identification of wildlife products that they encounter in their work. However, there will be cases where accurate identification is difficult. The guides provide the contact details for local and international experts in species identification, and international wildlife trade. Law enforcement officers are encouraged to seek help from these sources, in confirming the identification of difficult specimens. Additionally, the guides include some basic information on 'Advanced Wildlife Forensic Techniques', and suggest websites where further information may be found. Although such techniques are beyond the scope of the day-to-day operations of law enforcement officers, they may be very important in criminal cases involving wildlife products.

## Component 2: Development of a web-based service for providing species identification to law enforcement agencies in Vietnam

### Expected result:

The production of a user-friendly online interface and functions for Vietnamese law enforcement personnel to assist in species identification.

### Actual result:

WCS has produced Vietnam's first wildlife identification online tool: [www.giamdinhloai.vn](http://www.giamdinhloai.vn)

This result was achieved through cooperation with a professional website design company (Hanoi Software Company) who has extensive experience in developing websites for both government agencies and private businesses.

WCS designed a very simple interface including images and short pieces of text. The home page contains three main elements:

- 1) Species identification functions/tools,
- 2) Library of law documents & species resources (images, video clips, reports, and research papers),
- 3) An online support tool

Additional supporting pages include an introduction, FAQ, news, contact details, and a list of affiliated agencies.

The functions of the website are designed to be simple and accessible. There are six main identification functions, presented in the intuitive format *“I know/I have/I need...”*:

- I know the name of the species
- I know the taxonomic group
- I know the features of the species
- I have photographs of the species
- I need an expert to help for identification.

Each option then has step-by-step guidelines to help users with identification.

The website includes restricted, pass-word protected sections to ensure that we don't provide information to illegal trader and consumers. Users are required to log-in to access the full content. The website administrator will check users information and registration before activating the account.

We have developed full “species profiles” for 152 species through working with experts at CRES, the Endangered Primate Rescue Centre (Cuc Phuong National Park), the Carnivore and Pangolin Conservation Program (CPCP), the Asian Turtle Program, the Institute of Tropical Biology (Ho Chi Minh City), and others. This includes all species listed in Decree 32/ND-CP/2006 on the management and protection of endangered and valuable flora and fauna of Vietnam in addition to look-alikes and other commonly traded species and products.

Each Species Profile includes a range of photographs/clips, taxonomic information, key identification features, distribution, conservation and protection status, and information of experts on that species.

To develop the function of the *“I know the features of the species”*, we developed simple identification key for each species groups.

To maximize use of the website/service we have secured the collaboration and endorsement of the key relevant agencies in government i.e. Institute of Ecology and Biological Resources, Centre for Resources and Environment Studies, Institute of Tropical Biology, CITES management Authority, Anti-smuggling department of Customs, Environmental Police (pending), and the Biodiversity Conservation Agency of MoNRE. These agencies will promote the website to their provincial sub-departments through official letters, banner placement on their websites, articles in internal newsletters; provide content to the site (e.g. laws, images, and other relevant documents); and provide technical expertise and support as identification experts.

We have applied through the Ministry of Information and Communication to register the website with the Vietnamese government and expect the permit to be issued at the end of May 2012, and the website will go ‘live’ following that. WCS has developed a presentation introducing the website which will be included in all future trainings implemented by WCS. We have also produced 1000 pens, to be distributed to law enforcement officers, that advertises the site.

We have created the following account for CEPF to review the site:

**www.giamdinhloai.vn**

**Username: cepf@giamdinhloai.vn**

**Password: cepf@123**



**Figure 13: Example “Mind-map” – for identification of Felids by their features**



**Figure 14. Identification tool: I know feature of species which build based on Mind map tool.**

**Please provide the following information where relevant:**

- Hectares Protected:**
- Species Conserved:**
- Corridors Created:**

**Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.**

The short-term objective of this work is the development and launching of the identification website, and the publishing of the Wildlife Product Identification Guide in Laos, Cambodia, and Thailand. We have achieved its short-term by:

(i) *Developing the identification website, and populating it with all necessary content:*

- We developed a user-friendly interface for the identification website.
- We included 6 simple identification functions, depending on what information is already known to the user. The “I know the features of the species” option is new, and a different approach to that used by other websites of this type.
- We developed species profiles for 152 species.
- We collected wildlife laws and regulations, video clips, images, research studies, and reports for the website’s library.

(ii) *Bringing the website to law enforcement officers:*

- We secured the endorsement from CITES scientific and management agencies, and key government and law enforcement agencies who will promote the site to their staff.
- We will also send official letters introducing the website to 259 law enforcement agencies and write articles for internal media of key departments e.g. FPD, Police, Customs

(iii) *Publication of Wildlife Product Identification Guide in Laos, Cambodia, and Thailand*

- We have successfully completed an updated/improved version of the Vietnamese Wildlife Product Identification Guide, in Laotian, Khmer, and Thai languages.
- In order to ensure accurate translation from English into the local languages, additional time was taken at the translation and editing stages in the local languages. This caused a delay in

the actual printing and distribution of the product in the three countries, although all arrangements for this to happen have already been carried out.

The long-term goal of this work is to 'strengthen capacity for wildlife product identification for law enforcement officers'.

*(i) Maintaining the website, including quick responses to identification queries:*

To achieve our long-term goal will require ongoing maintenance and development of the website to work through bugs and continually improve the system and service to users and this will require further dedicated funding. In the interim, WCS is committed to this site and WCS staff will maintain the website, providing online support and ensuring quick response to users will increase the usefulness of the website. Furthermore, we will continue to promote the website through our ongoing activities in Vietnam.

*(ii) Promoting the use of the Wildlife Product Identification Guide among law enforcement officers*

The distribution of a useful, durable, concise, clear book, that can be easily used in the field will happen both through the scope of this grant, and also through future WCS training events in Laos, Cambodia, and Thailand. Officers trained in wildlife identification techniques will be given copies of this book, in the hope that this will promote the long-term application of skills and knowledge gained through training. Furthermore, the handbook and design files will be shared throughout the WCS regional network to allow other country programs and partners to benefit from this resource.

***Were there any unexpected impacts (positive or negative)?***

None

#### **Lessons Learned**

***Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.***

**The developing and maintenance of an identification website requires the work of full-time staff, who have knowledge and understanding of the internet, communication, and wildlife.**

In the first period of this project the work was carried out by part-time staff. The fact that this project required a lot of work, of various types (such as working with the website company, communication with partners, developing content with experts) meant that work progressed slowly. However, in the latter parts of the project, the work was taken on by a full time staff member, ensuring its proper completion.

Future work on this website (development and improvement of identification tools) will require the time of staff members with expertise in communication, to connect law enforcement officers using the website to species experts.

**Publication of Wildlife Product Identification Guide in Thailand, Laos, and Cambodia, in local languages**

Accurate translation work requires significant investment of time, including considerable time spent checking and editing translated materials.

#### **ADDITIONAL FUNDING**

**Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.**

Donor	Type of Funding*	Amount	Notes

**\*Additional funding should be reported using the following categories:**

**A** Project co-financing (Other donors contribute to the direct costs of this CEPF project)

**B** Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)

**C** Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)

### Sustainability/Replicability

#### Long-term Sustainability/Replicability

- The guide is printed in a durable form, to ensure its utility in the long term and availability for succeeding officers to use in the enforcement of wildlife laws and regulations. It will also be provided to law enforcement agencies in soft-copy.
- Under this grant the website and associated hosting and maintenance costs will be covered for two years. Following this grant, WCS will support the sites upkeep until longer-term funding can be secured.

### Safeguard Policy Assessment

**Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project**

n/a

### Performance Tracking Report Addendum

#### CEPF Global Targets

### (Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant.  
Please respond to only those questions that are relevant to your project.

Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved from July 1, 2010 to June 30, 2011. (Attach annexes if necessary)

1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	No			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1 below.	No			

**If you answered yes to question 5, please complete the following tab**

<b>Additional Comments/Recommendations</b>
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<b>Information Sharing and CEPF Policy</b>
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CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, [www.cepf.net](http://www.cepf.net), and publicized in our newsletter and other communications.

**Please include your full contact details below:**

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