OM 4.5.4 (Rev)

CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Cleveland Zoological Society
Project Title:	Research and Conservation Action for Tortoises and Freshwater Turtles in Indo-Burma
Date of Report:	15th July 2013
Report Author and Contact Information	Timothy McCormack – Program Coordinator Asian Turtle Program (ATP) of Cleveland Zoological Society tmccormack@asianturtleprogram.org PO Box 179, Hanoi Central Post Office, Hanoi, Vietnam Tel: +84 (0) 4 3514 9750

CEPF Region: Indo-Burma

Strategic Direction: 1. Safeguard priority globally threatened species in Indochina by mitigating major threats

Grant Amount: US$154,950

Project Dates: 1 October, 2009 to 31 March, 2013

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

The Asian Turtle Program (ATP) of Cleveland Zoological Society (CZS) has worked closely with a number of NGO and governmental partners to ensure the successful implementation of this project in Vietnam and Cambodia. With a long term working relationship with the local NGO, Education for Nature Vietnam (ENV), we have worked closely with them on development and implementation of all awareness and environmental education components, with staff receiving training and guidance from ENV management. We have also provide wildlife trade information to ENV's wildlife trade hotline and helped facilitate confiscations from central Vietnam to rescue centres such as the Turtle Conservation Centre (TCC) of Cuc Phuong National Park in Ninh Binh province.

For surveys in Vietnam we have also coordinated with relevant authorities, all surveys have included communications with Forest Protection Departments (FPD) and People Committee in the province, districts or protected areas being surveyed, with meetings pre and post surveys with FPD to discuss survey areas, objectives and findings. Results of surveys have been disseminated to FPD while for three provinces day long training activities have been undertaken with approximately 20 rangers participating in each province while results and findings from surveys have been presented. Through training we also hope to establish working relationships and priorities for future turtle and freshwater turtle (TFT) conservation in these province. For some survey activity, for example in Phu Yen province, we undertook joint surveys with the Centre for Resources and Environmental Studies (CRES), Hanoi.

For the establishment of the Species Habitat Conservation Area (SHCA) in Quang Ngai province we have worked very closely with the Forest Protection Department (FPD) to develop the project. This has included meeting with local people's committee and a number of key households using areas within the proposed site.

In Cambodia, WCS has led work on *B.affinis* at the Sre Ambel River, in collaboration with the Fisheries Administration (FiA) of the Ministry of Agriculture, Forestry and Fisheries (MAFF). The WCS partnership has also been facilitated by the fact that ATP already share an office with WCS

Vietnam in Hanoi. Dr Horne WCS's global turtle specialist has made a number of trips to Vietnam, including trips to project areas in central Vietnam, during which discussions and reviews of project activities in Cambodia and Vietnam have been made. Working with WCS Vietnam has also been important in providing support to the submission of the CITES CoP proposals by Vietnam's CITES management authority.

Conservation Impacts

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

In the original call for proposals it was clear that the regions tortoise and freshwater turtles were a considerable focus. With 21 (31.5%) of the original 67 priority species for the IndoBurma region actually TFT. This is largely due to the intense pressure populations have been placed in recent decades since the Asian Turtle Crisis was first identified. Within our project activities we have increased knowledge considerably on 9 of these priority species, the Asiatic softshell turtle, *Amyda cartilaginea,* Indochinese box turtle (*Cuora galbinifrons*), Chinese three-striped box turtle (*Cuora trifasciata*), Impressed tortoise (*Manouria impressa*), Vietnamese pond turtle (*Mauremys annamensis*), Chinese striped-necked turtle (*Mauremys sinensis*), Wattle-necked softshell turtle (*Palea steindachneri*), Asian giant softshell turtle (*Pelochelys cantorii*) and Four-eyed turtle (*Sacalia quadriocellata*). In additional information on 10 additional species of TFT has been increased. The Mangrove Terrapin (*Batagur affinis*) was not original included in the call as it has only relatively recently being split from *Batagur baska*.

Specifically our project contributed to investment strategy 1.1, in identifying and securing core populations of 67 globally threatened species from overexploitation and illegal trade.
Thanks to support of this CEPF project the understanding of distribution of species and areas of high diversity are more clearly know than ever before. This is allowing the targeted focus of conservation efforts of TFT through enforcement and awareness as more clearly explained in the project component section.

Also 1.2, implementing public awareness campaigns that reinforce existing wildlife trade policies and contribute to the reduction of consumer demand for 67 globally threatened species and their products.
Following surveys and improved knowledge on the TFT of central Vietnam achieved through surveys awareness activities have been more focused. With school and community meetings targeted on key communities and training of FPD highlighting provincial priorities.

Please summarize the overall results/impact of your project.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

- Regionally TFT fauna have better protected directly as a result of project activities through increasing the knowledge on *Cuora bourreti*, *Cuora picturata*, *Mauremys annamensis*, *Batagur affinis* and a group of other species for the first time. In particular through awareness of priority protected areas by wildlife protection authorities.
- The development of the ATP national staff as TFT research conservationists and environmental educators will be one of the single largest steps forward made in chelonian conservation in Southeast Asia to date. Providing a solid base for regionally led conservation initiatives in the future.
- The attitudes of local communities to TFT will be changed through a better understanding of their importance.
- Sustainable management of the only known breeding population o *Batagur affinis* in IndoBurma will be secured.
- Improvements to TFT protection under national laws in Vietnam through making recommendations to change legislation based on findings of our activities.

Actual Progress Toward Long-term Impacts at Completion:

Better protection through increased knowledge

Regionally TFT fauna have had their knowledge greatly increased. The species of *Cuora bourreti*, *Cuora picturata* and *Mauremys annamensis* now have more clearly defined distributions and priority area for conservation of all three have been identified and local authorities and FPD informed. All three species were observed in the local trade and both box turtle species were confirmed in the wild at sites. For *Batagur affinis* use of its habitat has been better understood through the use of a satellite transmitter for tracking and location of nesting beaches in Cambodia. The distribution and knowledge of 22 regional TFT has been increased through the project activities, including nine CEPF investment strategy focal species. Through raising the profiles of these species protection has been indirectly improved throughout the range, this can be highlighted through the confiscations and voluntary handing in of turtles observed in both Cambodia and Vietnam which would likely not have happened without this projects sustained focus.

Development of a national team

The development of the ATP national staff as TFT research conservationists and environmental educators has made considerable steps towards increasing chelonian conservation in Southeast Asia. A strong national team of staff has been established, largely formed from previous students who participated in the annual TFT Field Skills Training Course which has run annually in Cuc Phuong National Park, Ninh Binh Province, Vietnam, by the ATP and the Turtle Conservation Centre (TCC) of the park. Some staff have developed significantly and are now running many aspects of the program including annual activity planning and developing and implementing research and awareness activities. Some challenges have been faced, encouraging staff to remain in central Vietnam's Quang Ngai province has been difficult, with some staff working for one or two years before leaving for the lure of larger cities such as Da Nang, Ho Chi Minh and Hue.

Staff also attained a number of training scholarships to further improve their knowledge and abilities. These include study programs in Borneo, Indonesia and the United States of America and a Master course in Australia. These further training opportunities give an indication of how staff have developed personally during the project. Importantly the team have established a strong presence and recognition in provinces which they work and have developed good relationships with local government and non-government partners.

Attitudes of local communities

Improved knowledge on the species distributions and priority areas as used to focus protection and awareness efforts. This has included training with Forest Protection Department (FPD) in three provinces, and 34 community awareness events in four provinces. Community activities have been extensive 26 days of school programs reaching 4,910 pupils focused on *Mauremys annamensis* and *Cuora bourreti*. This has seen animals handed in and information frequently reported to the team in key communities. A novel approach for reaching difficult audiences has been utilized, in particular young males. This was done through the use of community football matches between villages to raise awareness to TFT in the area. Although difficult to quantify we have had animals handed in to the team and regularly receive information from local counterparts and students regarding turtles caught in the areas in Vietnam. In Cambodia community support has seen four *Batagur affinis* handed into the team.

Sustainable management of *Batagur affinis* in Cambodia

During the project period 49 *Batagur affinis* have been head-started from nest beach protection increasing the total head started animals from 2002 to 270 animals. Through bringing 42 new animals into the captive assurance breeding colony it now means that a secure population of 136 animals are now being managed for long term captive breeding to produce hatchlings for augmenting wild populations in the future, a 44.6% increase. Prior to the CEPF project, records of wild nesting turtles had dropped from seven nests in 2002-2003 to zero in 2007-2008. As a consequence of the increased patrolling and nest protection as part of the CEPF, nesting occurrences recovered to three nests in 2011-2012.

Improvements to TFT protection under national laws in Vietnam
Recommendations have been submitted to MoNRE in Vietnam for the inclusion of the *Cuora galbinifrons* species group on Decree 32 when it is updated in 2013. *Mauremys annamensis* is already appendix II on Decree 32/2006/ND-CP. Working closely with the Wildlife Conservation Society (WCS), Vietnam, and individuals within the IUCN and CITES management authorities of Vietnam we assisted in the development of proposals for the up listing of *Cuora galbinifrons* and *Mauremys annamensis* from appendix II to appendix I, although this was not successful both species were up-listed to appendix II zero quota at the March 2013 CoP 16 in Bangkok, Thailand.

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

- Priority protected areas or habitat for TFT will be identified, filling gaps in the current knowledge on distributions and status of TFT in the region. Achieved through conducting the most comprehensive surveys to date in Central Vietnam and for *Batagur affinis* in Cambodia.
- Awareness of local communities and government agencies to the importance of TFT and their need for conservation will be increased.
- National teams will have received significant training and experience in developing and maintaining species focused conservation projects through a variety of methods.
- Key habitat for *Mauremys annamensis* will be identified in central Vietnam.
- Maps of *Mauremys annamensis* historic and believed current distribution will be created along with recommendations for priority areas.
- A small species habitat conservation area will be established with joint community and FPD patrols.
- Key protected areas for *Cuora bourreti* and *Cuora picturata* will be identified allowing areas with the best remaining populations to be targeted for future activities.
- Progress made towards having *Cuora bourreti*, *Cuora picturata* and *Cuora galbinifrons* protected under national law in Vietnam.
- Nesting beaches for Batagur affinis will be protected along the Sre Ambel River through community support
- Four additional river systems will be surveyed to confirm if Batagur survive in these additional areas
- The head starting facility will continue to be supervised by the Batagur team with staff form the local community responsible for daily care of the animals.

Actual Progress Toward Short-term Impacts at Completion:
Priority protected habitat and sites currently unprotected but important for three focal species in Vietnam, *Mauremys annamensis, Cuora bourreti* and *Cuora picturata* have been identified. This was accomplished during a total of 170 days of interview surveys in which 1,130 interviews were conducted and 625 specimens observed. Range extensions for two additional species was also indicated through interviews. Trapping surveys also confirmed the endangered *Mauremys sinensis* at an additional site which can be considered a range extension for the species. While field surveys in five provinces did confirm the endemic *Cuora picturata* at two sites, *Cuora bourreti* at one site and the endangered *Cuora mouhotii obsti* at two sites. Surveys for *Batagur affinis* were carried out in Cambodia, particularly for nesting beaches in the Sre Ambel area, and a satellite transmitter study clearly indicated habitat used by the single adult female tracked outside of the nesting season/beach locations.

Local community and government agency awareness increased
In Vietnam community activities have engaged over 805 village members and 4,910 school pupils at key sites with awareness activities focused on TFT. Forest Protection Department (FPD) in key provinces of Thua-Thien Hue, Quang Ngai, Phu Yen and Khanh Hoa have been involved in training activities or the establishment of a conservation area. Further media activities have involved over 27 journalists. In Cambodia the Fisheries Administration and local communities have been involved in patrols and awareness has resulted in the voluntary handing in of four *Batagur affinis* from local fishermen and the confiscation of two additional animals.

Development of national teams
In Vietnam national staff have been involved in various training program including GIS, training of survey dogs for research by a team from the UK, environmental education training in design and implementation of awareness activities for schools and communities. In addition some staff received English training or were successful independently in securing short training courses in the USA and Indonesia while one staff member has actually progressed to undertake a Masters degree in Australia. Training throughout implementation of the project means that two staff are now managing small research grants related to TFT conservation in Vietnam more independently and have been involved in proposal and report writing.

Key habitat for *Mauremys annamensis* identified in central Vietnam.
Key sites for the species have been identified in Quang Nam, Quang Ngai and Phu Yen province while additional area where the species occurs in Binh Dinh, Gia Lai and Dak Lak have also been found. Although the species is clearly heavily exploited and severely reduced throughout its range trade animals indicate the species still survives in the wild with one site in Quang Ngai province a focus for conservation efforts with a second site in Phu Yen province a potential second site.

Maps produced for *Mauremys annamensis* distribution
Maps of the districts throughout central Vietnam in which *Mauremys annamensis* has been reported as surviving at present and historically occurring have been produced and presentations made in Phu Yen and Quang Ngai province to highlight areas of importance to FPD authorities in these provinces.

Species Habitat Conservation Area established with joint community and FPD patrols
A site has been identified and a 1:2,000 map of the area produced. Through the development of a proposal for the SHCA a small grant has been received from the IUCN Netherlands SPN grant to compensate household for land in the area. Provincial approval has been given to establish a conservation area but household negotiations are now required. As such this planned impact is still not completed. Local staff and FPD have been involved in some patrols and field work, trapping and radio tracking at the site while local police have also participated removal of aquatic traps focused on turtles.

Key protected areas for *Cuora bourreti* and *Cuora picturata* will be identified
From surveys completed Song Thanh Nature Reserve in Quang Nam province and Sao La Nature Reserve in Thua Thien Hue province have been identified as key sites for *Cuora bourreti* while Deo Ca – Hon Nua special use forest in Phu Yen and Khanh Hoa province and Khanh Vinh district in Khanh Hoa province have been identified for *Cuora picturata.* Community awareness activities have started at these sites and training undertaken with provincial FPD including highlighting these areas.

Protection of *Cuora bourreti*, *Cuora picturata* and *Cuora galbinifrons* under national law in Vietnam.
Recommendations have been submitted to MoNRE in Hanoi recommending with justification the need to list these species under under a new wildlife protection law being revised for 2013.

Nesting beaches for *Batagur affinis* will be protected along the Sre Ambel River through community support
Nesting along the Sre Ambel river in Cambodia has increased from zero nests in 2007-2008 to three nests in 2011-2012. In total 106 eggs in eight nests produced 49 hatchlings during the project period. Local community patrols teams have worked with Fisheries Administration staff in undertaking weekly patrols and have made confiscations of two animals and had a further four animals voluntarily handed in from local fishermen.

Four additional river systems surveyed for Batagur in Cambodia
This activity was not undertaken and instead replaced with the satellite transmitter study of home range and habitat use in a large female *Batagur affinis* transferred to the team from a local fisherman.

Head starting facility will continue to be supervised by the Batagur team
The facility has been improved with a new well and captive animals has increased with 42 additional hatchlings being head-started at the centre from nests protected during the project period. A second assurance colony is also being established at the Angkor Centre for Conservation and Biodiversity (ACCB) in Siem Reap. No captive nesting has taken place yet as most animals, 136, are hatchling - sub-adults and not mature. The two adult animals have been brought together for breeding at the ACCB facility.

Please provide the following information where relevant:

The Species Habitat Conservation Area (SHCA) in Quang Ngai province is still underdevelopment. The site has potential for approximately 130ha of habitat for *Mauremys annamensis* once completed.

Hectares Protected:
Species Conserved:
Corridors Created:

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

Overall the project has been very successful, our understanding of the distribution of TFT in central Vietnam is the clearest it has ever been with priorities for conservation clearly identified. Support for provincial Peoples Committee and FPD has been important in accomplishing this. Although awareness activities with local communities and governmental agencies in Vietnam and Cambodia have had some positives results surveys have clearly indicated that hunting and trade are continuing at unsustainable rates and there is clearly a need for stronger enforcement to accompany the softer community engagement and awareness approach. Without the enforcement it is likely some species cannot be effectively protected. *Mauremys annamensis* and *Mauremys sinensis* in Quang Ngai province are prime examples, occurring in fragmented lowland areas they are in close proximity to local communities, coupled with high economic value the risk of collection is high. During the course of the project 13 *Mauremys annamensis* were observed during the course of the project, this species is fully protected under Decree 32/2006/ND-CP yet enforcement against individuals with endangered or protected wildlife in Vietnam is rare.

Similarly the observation of a number of “farms” in Phu Yen province keeping large numbers of endangered and protected turtles yet with no clear method to regulated animals highlights one of the challenges to conservation. The identification of priority area and building of community support can only do so much if the financial incentives and mechanisms to trade wildlife within the region remain. The proliferation of such farms seems likely as traders are forced to become more legitimate due to improved enforcement, but without monitoring of such farms they simply allow the trade to continue but with the façade of legitimacy.

It is likely that the challenges of enforcement are applicable to most projects supported by the CEPF in Indo Burma and consideration should be given to address these problems more directly.

Were there any unexpected impacts (positive or negative)?

Some positive impacts have been the increased transfer of animals to the authorities in Vietnam or directly to ATP staff in Vietnam. As well as the improved vigilance and responsiveness of wildlife protection authorities during and post project. In Vietnam both Quang Ngai and Khanh Hoa province have made confiscations of animals that have been transferred rescue centres. Most recently Khanh Hoa confiscated four *Mauremys annamensis* of which two were alive and transferred in May 2013. These animals will be important breeding animals for the captive assurance colony. In many instances it does appear that a lack of knowledge has resulted in priority TFT not been high on the list of wildlife protection authorities in the region and awareness and training amongst these official along with provision of support and equipment could see improved enforcement and confiscations.

Project Components

Project Components*: Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.*

Component 1 planned:
Core populations of priority tortoise and freshwater turtle species identified.

1.1. Interview surveys conducted for *Mauremys annamensis* in lowland central Vietnam
1.2. Field surveys conducted for *Mauremys annamensis* in lowland central Vietnam
1.3. Interview surveys conducted for *Cuora bourreti* & *Cuora picturata* in central Vietnam forests
1.4. Field surveys conducted for *Cuora bourreti* & *Cuora picturata* in central Vietnam forests

Component 1 Actual at completion:

Interview survey findings
Intensive interview based surveys were undertaken to identify populations of critically important tortoise and freshwater turtle species in central Vietnam. Priorities sets were linked to the CEPF investment strategy. These included Asiatic softshell turtle *Amyda cartilaginea*, Indochinese box turtle, recently split into three separate species, *Cuora galbinifrons, Cuora picturata, Cuora bourreti,* Yellow-headed temple turtle *Heosemys annandalii,* Impressed Tortoise *Manouria impressa,* Vietnamese pond turtle *Mauremys annamensis,* Chinese stripe-necked turtle *Mauremys (Ocadia) sinensis,* Wattle-necked softshell turtle *Palea steindachneri,* Asian giant softshell turtle *Pelochelys cantorii,* Four-eyed turtle *Sacalia quadriocellata* and Chinese three-striped box turtle *Cuora trifasciata.*

Particular focus was made on the critically endangered endemics occurring within the project focal area for which little previous knowledge was available. These were the Vietnamese Pond Turtle (*Mauremys annamensis*), Bourret's Indochinese Box Turtle (*Cuora bourreti*) and the Lesser Indochinese Box Turtle (*Cuora picturata*). The objective was to more clearly define the distributions and priority areas of these TFTs in central Vietnam. To confirm habitat localities for the endemics and also areas of high species diversity that will become priorities for conservation.

Survey activities undertaken as part as component one have been extensive, over 170 interview days have been completed in the 11 focal provinces with an additional 12 trapping surveys for *Mauremys annamensis* and six fields surveys for forest species. These interview and field surveys are summarized below.

Methods

Surveys were conducted over a large geographic range extending from the 12th - 17th parallel ranging from the south China sea coast to the mountainous western boarders with Lao PDR and Cambodia encompasses an area of 330,957km^2 . This included Kon Tum, Gia Lai, Dak Lak and Dak Nong provinces within the central highlands and Thua-Thien Hue, Da Nang, Quang Nam, Quang Ngai, Binh Dinh, Phu Yen and Khanh Hoa provinces of the north central and central coastal area of Vietnam with a focus on the central Annamite mountain area.

Map of survey area in central Vietnam

Interview structure & results

Semi-structured interviews were conducted, in which the interviewers collect information on local names of species from interviewees before asking additional information on the species characteristics, habitat, behaviour and ecology, trade and hunting techniques and values. Photographs were then shown and interviewees asked to provide local names to see if they correspond with information species given. In many interviews specimens of turtles were also provided, these are either dead specimens such as preserved animals, dried or kept in alcohol or shells/bone fragments. In some instances remains were not adequate to make a species identification.

Interpretation and use of interview information to identify species.

Follow the interviews information has been scored and species determined based on the quantity and quality of evidence provided to the team during the interview for species within each district.

0 = unknown,
1 = poor description
2 = good description
3 = good description with corresponding identification of photograph
4 = dead specimen presented
5 = live specimen presented

While good descriptions of species during interviews can be strong indications species occur in an area there are risks of confusion. Where possible trade animals have been sought to provide additional support while field have been undertaken at priority sites identified for the focal species of this project. Additional field surveys were undertaken at selected sites but additional future field surveys are strongly recommended for confirmation of species.

In many instances interview information was unclear with no possibility of determining the species being described, identification of photographs alone was not included as a species identification due to the higher chance of inaccuracies, in these situations no assumption of species was made and no species allocated to the local name. Dummy photographs of non-native turtles were also included on occasion and identified with local names. Local names were disregarding with initial identification based on interview information due to the frequency with which local names are often applied to multiple species. For example *Cuora trifasciata* and *Indotestudo elongata* are both referred to as "Rua Vang", Golden Turtle, due to coloration. While "Rua Nuoc", Water Turtle, is often applied to all aquatic species even though three or more species may occur at a location. The presence of many ethnic minorities with individual languages within the central highlands further complicated the use of local names.

Another important consideration is that some species are more easily described due to clearly identifiable diagnostic characteristics, habitat traits or economic values. For example *Manouria impressa* is the only species in Vietnam that has two additional horny spurs either side of its tail, *Platysternon megacephalum* is the only species unable to retract its large armoured head and *Cuora mouhotii* is the only Vietnamese turtle in which some individuals have blood red eyes. Other characteristics such as hinged plastron assisted the teams.

Other species are difficult to distinguish based on interview information, for example turtles of the genus *Mauremys* are very similar in appearance whilst also displaying similar behaviour and some species occurring sympatrically. For three species *Mauremys annamensis*, *Mauremys mutica* and *Mauremys sinensis* head markings, slight variations in plastron markings and economic value are key. *Mauremys annamensis* has only three yellow head stripes and high economic value while *Mauremys sinensis* has many small yellow/white stripes and lower economic value. Often it is only experienced hunters and traders who are able to differentiate these species during interviews and provide alternate local names for them. Similarly the terrestrial *Cuora mouhotii* and largely aquatic *Cyclemys sp.* may be confused, inhabit the same forest areas and sharing similar characteristics although one is aquatic the other terrestrial.

Collection of trade and field record information on species.
For all specimens encountered standard trade/field record forms were completed including records of situation of animals, weights, vertebral carapace lengths and midline carapace widths. GPS locations and standard photographs of carapace, plastron and where possible head markings were also recorded, in a few circumstances specimens were gifted to the team, if live animals these were either released close to the capture location or transferred to the Turtle Conservation Centre (TCC) or Cuc Phuong National Park, Ninh Binh province.

In the event of a large number of animals being observed at a single establishment, for example wildlife farms or traders, a field record was completed for at least one specimen of each species including measurements and individuals of each species were counted to give an accurate number. In some circumstances additional animals could not be counted as they were maintained in ponds, these have been excluded. Information was added to a field record database managed by the ATP.

Results

Survey period:
Although the CPEF support for this project did not start until the 1st of October 2009 due to requirements in finalizing the agreement. Initial surveys related to this project commenced from the 1st of July 2009 support with additional funding.

Table of surveys completed:

Province	***Note Interview dates***	***# days***
Thua Thien Hue	Phrase I: 1-8June 2011, Phrase II: 5-10 December 2011, Phrase III: 15 - 21 Oct 2012	20
Da Nang	30th June - 8th July 2009	9
Quang Nam	25th Feb - 7th Mar 2013	11
Quang Ngai	I: 26-28 Mar 2010, II: 8 - 9 Mar 2011, III: 16-20 May 2011, IV: 13 - 19 August 2011	17
Binh Dinh	Phrase I: 15th - 23rd August 2009, Phrase II: 06th - 09th October 2009	12
Phu Yen	Phrase I: 5-12 Aug 2009, Phrase II: 19 - 22 Oct 2011, Phrase III: 23-28 Nov 2012	18
Khanh Hoa	Phrase I: 24 Aug - 03 Sep 2011, Phrase II: 27 - 31 Aug 2012	16
Kon Tum	Phrase I: 10-18Sep2010; Phrase II: 23-26Nov10	13
Gia Lai	Phrase I: 26Dec2009 -7Jan2010; Phrase II: 4-12August2010	21
Dak Lak	I: 22nd – 28th September 2010; II: 10th - 19 January 2011, III: 14th- 19th March 2011	23
Dak Nong	20-29 June 2011	10
Total		170

From the 1st July – 7th March 2013 a total of 24 interview surveys were completed with 170 survey days in all 11 provinces. During which 1,130 interviews were conducted with 625 specimens observed. An additional 219 specimens were also observed, presented to the team by the Forest Protection Department (FPD), other NGO's, students and local counterparts outside of the interview survey periods or found during field surveys.

The total of 844 specimens observed represented 19 of Vietnam's 25 native tortoise and freshwater turtle species, in addition the hybrid, *Mauremys glyphistoma* between *Mauremys annamensis* and *Mauremys sinensis* was also observed and the non-native North American red eared slider turtle (*Trachemys scripta elegans*).

Table of specimens observed during interview survey period July 2009 – April 2013

Province	*# Interview*	*# Field records completed during interviews*	*Field records from other sources eg. local counterparts, students, FPD*	*Total specimens observed*	*# Species observed FR*	*# Species described province*
Thua Thien Hue	117	78	41	119	8	14
Da Nang	38	7	12	19	3	unk
Quang Nam	60	49	2	51	6	9 (*12)
Quang Ngai	126	27	130	157	10	13
Binh Dinh	110	17	0	17	8	14
Phu Yen	152	188	10	198	12	14
Khanh Hoa	132	24	15	39	6	11
Kon Tum	72	41	0	41	6	12
Gia Lai	163	60	8	68	8	15
Dak Lak	123	93	1	94	12	14
Dak Nong	37	41	0	41	8	10
Total	**1130**	**625**	**219**	**844**		

* including results from previous surveys

In some provinces survey findings support and expand upon previous information collected in interview or field surveys by the ATP conducted since 2004, these will be discussed separately.

Importantly populations of all three priority species were identified during the interview service, *Mauremys annamensis, Cuora bourreti* and *Cuora picturata.*

Short summary of findings for provinces during interview surveys

Thua-Thien Hue province:
Including species observed outside of the interview surveys a total of 87 specimens of 10 species were documented for Thua-Thien Hue province. With 22 *Cuora bourreti* observed in the province the districts of A Luoi, Nam Dong, Phu Loc, Phong Dien, Huong Tra all had good information for the species, no information was reported in Huong Thuy district but this is due to only three interviews being conducted in the district and the species is also expected to occur here. At higher elevations in these districts populations of *Manouria impressa* and *Platysternon megacephalum* are expected.

Cuora bourreti seen in Nam Dong district, Thua Thien Hue province in October 2012

One specimen of *Pelochelys cantorii* was reported in October 2010 in Hue city but with a trader who reportedly frequently buys wildlife from Lao PDR so origins are unknown. This species is infrequent in the wildlife trade in Vietnam and should be considered a priority for conservation and enforcement.

One interview account of a lowland wetland species of high value that fits the description of either *Mauremys annamensis* or *Mauremys mutica* in Phu Son commune, Huong Thuy district which deserves some additional surveys.

Extensive interviews were conducted in Nam Dong district between Sao La Nature Reserve and Bach Ma National Park with 48 interviews conducted. In this area alone 11 species were described with five species observed, this may in part be due to the intensiveness of the surveys but it is still considered an area of high diversity and important for tortoise and freshwater turtle conservation in Vietnam. Cooperation with both WWF and Sao La Nature Reserve FPD resulted in additional field records at the site and one ranger from Sao La also participated in the annual tortoise and freshwater turtle field skill training course.

Jar containing an endemic Cuora bourreti and hoof from a ungulate in rice wine

Natural remaining forest in A Luoi district, Thua Thien Hue province

Da Nang province:
Da Nang province has been the focus on previous surveys by the ATP for *Mauremys annamensis.* Student surveys have also been supported in Son Tra Nature Reserve. During the interview surveys here 19 additional trade records of five species were recorded.

Within Da Nang historical information for *Mauremys annamensis* does occur with four specimens observed since 2006. Son Tra Nature Reserve should be considered as a potential site for the species if it can be confirmed although limited low wetland areas will reduce habitat potentially available for the species at the site. 10 *Cuora bourreti* were also observed with the species occurring in the Ba Na – Nui Chu area bordering Quang Nam and Thua-Thien Hue provinces. A student survey supported by the ATP from October 2008 to May 2009 also confirmed five native species found in the wild at Son Tra Nature Reserve, Da Nang.

Quang Nam province: surveyed mainly moment lowland areas in the province in search of *Mauremys annamensis.* From surveys conducted in 2013 there were 49 specimens of seven species observed, this included 14 *Cuora bourreti* and 17 *Cuora mouhotii.* Tay Giang and Dong Giang districts were identified as good localities for these two species. In 2006 interview and field surveys had indicated Nam Giang province and in particular Song Thanh Nature Reserve as a site for *Cuora bourreti* conservation with 9 specimens observed around the park.

Phuoc Son district which is where the holotype of *Mauremys annamensis* was reportedly collected by Sibenrock in 1903 had little information documented for the species. The district did however have strong information for another critically endangered species, *Cuora trifasciata* which was also reported. However the high economic value of this species means where ever it occurred historically hunting pressure has been intense and locals now report the species as extremely rare.

Including previous interview surveys from 2006 in lowland areas a total of 12 species have been described for the province. The 2006 surveys had already indicated remaining populations of *Mauremys annamensis* with 17 specimens observed and key districts of Duy Xuyen, Dien Ban and Tien Phuoc identified.

Kon Tum province:
Kon Tum province had relative few species compared to other provinces surveyed, with only 11 descried, 39 specimens of six species were observed. In terms of priority species no information was recorded for *Mauremys annamensis* while only a few accounts were given for *Cuora bourreti* in Ngoc Hoi, Kon Ray and Dak Ha districts. Priorities for the province would appear to be *Manouria impressa* and *Platysternon megacephalum* of which 14 and 12 specimens were observed respectively. Both species were present in most districts within Kon Tim and are protected under national law Decree 32 within Vietnam yet are suffering from over exploitation. Kon Ray, Kon Plong in particular had good descriptions for these species but it is likely that quality remaining forest in the province will maintain these two species which can both occur at high elevations.

Despite being Decree 32 listed many Platysternon megacephalum were observed in the trade

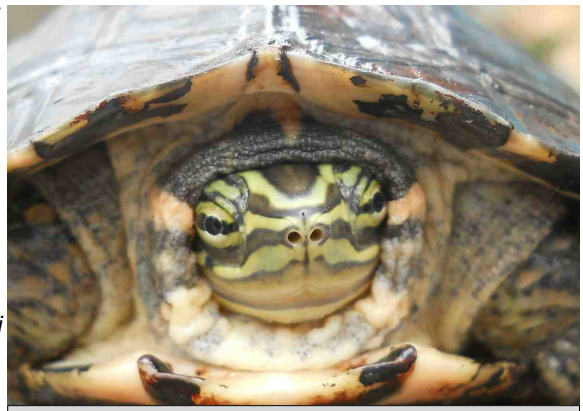
Photo left: three juvenile Platysternon megacephalum, Decree 32 species seen in Kon Ray district, Kon Tum province.

Photo right: Frozen pangolins and a macaque seen in a wildlife restaurant Dak Rve town, Kon Ray district, Kon Tum province.

Of interest was the observation of a *Cuora amboinensis* in Dak Glei district which was reportedly locally caught, with the species occurring at more northerly latitudes in Lao PDR and the relatively low elevation found in Dong Amphan NBCA protected forest on the Lao PDR side of the boarder the species may occur. Additional interview and field surveys could confirm and it maybe the northern most range of the species in Vietnam.

Quang Ngai province:

During interview surveys in 2010-2011 a total of 26 specimens were observed of 10 species, with a total of 13 species described for the provinces. The most significant finding for the province was information relating to *Mauremys annamensis.* Although the species is difficult to identify through descriptions reports, outside of the interview survey periods 12 live *Mauremys annamensis* were observed by ATP staff during other activities or reported by local, all these specimens were in Binh Son district. Strong information was also reported for *Cuora bourreti* in Ba To and Binh Son districts.



The endemic Mauremys annamensis is still appearing in trade in Quang Ngai province indicating a surviving wild population

Gia Lai province:
Had strong information for a number of species, with 15 species described and 48 specimens observed for eight species. Information for *Mauremys annamensis* was limited to two low lying eastern districts of Krong Pa and An Khe with 21 specimens observed at one household in An Khe. Earlier 2006 surveys had found additional information for the species in K Bang and Dak Po districts also in the east of the province.

Both *Cyclemys oldhamii* and *Cyclemys pulchristriata* were observed representing the more northern and southern species of the genus occurring in Vietnam. Also of note was the observation of 13 *Indotestudo elongata,* with the species being reported as relatively abundant in the province and reported for every district.

Also of significance were reports for *Cuora trifasciata* in the province, which was described in five districts, an earlier 2007 survey had found a concentration of information for this critically endangered species.

The district of Krong Pa, Krong Po also had information for box turtles that are most likely *Cuora bourreti* although no specimens were observed in the province.

Binh Dinh province:
Despite only 17 specimens of eight species being observed Binh Dinh province had good information for a number of species. *Mauremys annamensis* was described for all districts but is considered extremely rare. Four specimens were observed in Phu My district. Some districts such as An Lao, Hoai An and Vinh Thanh have high species diversity with potential 10 or more species occurring.

With reports of the Asian giant softshell turtle, *Pelochelys cantorii,* in four districts surveys focused on this species should be considered for the An Lao and Con river as the species has no known breeding population in Vietnam.

Phu Yen province:
Within Phu Yen province a large number of specimens was observed, 123, of 10 species, this was largely due to two farms visited. The largest farm/trader was in Dong Hoa district where a single trader has 98 animals of nine species, 61 of which were *Indotestudo elongata* a protected species under Decree 32/2006/ND-CP. These animals were clearly wild caught and kept in conditions that made the team believe they were only short term holding of trade animals. The trader claims to be a registered farm. The regulation and monitoring of existing farms will be essential if many of Vietnamese TFT species are to be protected.

61 Decree 32 Indotestudo elongata observed in Dong Hoa district are likely to be wild caught

A second farmer in Song Cau district was also observed with at least 20 *Mauremys annamensis,* he claimed to be keeping 70 animals but only 20 were counted with others likely in ponds. Again this farm is apparently registered but regulation of such farms is virtually impossible without animal identification or micro-chipping in place.

It is likely *Mauremys annamensis* do survive in the province, with reports of animals being caught in Song Hinh district. The discovery of wild *Cuora picturata* by a Ho Chi Minh city field team in 2010 in Deo Ca – Hon Nhu special use forest in Dong Hua district was very significant for the province as the species prior to this had no known populations. With the possibility that in the north of Phu Yen province in Dong Xuan and Son Hoa district reports of box turtle could be *Cuora bourreti* which would mean three endemic might occur in the single province.

Observation of *Sacalia quadriocellata* in local trade in Song Hinh district are also indicate a considerable extension of this species range.

Dak Lak province:
In all 14 species were described and 124 specimens of 12 species observed. Interview results from Dak Lak province were interesting in that we started to see more species associated with southern Vietnam and Cambodia. Notably in Ea Sup and Buon Don district near Yok Don National Park specimens of *Cuora amboinensis* were seen. Both *Heosemys grandis* and *Malayemys subtrijuga* were observed and described more frequently in Dak Lak province with 29 and 16 specimens observed respectively.

Some information was also found for *Cuora picturata* in Ea H'leo and M'Drak districts which warrants further investigation. While *Mauremys annamensis* was also reported in M'Drak district where a single live animal was also observed in a local household.

A Cuora mouhotii in a local household interview, Khanh Vinh commune, Khanh Hoa province

Khanh Hoa province:
Khanh Hoa and Dak Nong provinces represented the southern extent of the range of survey activities under this project. In Khanh Hoa province 11 species were described with trade records recorded for 39 animals of 6 species. The highly localized endemic, *Cuora picturata* was recorded for Van Ninh, Ninh Hoa and Khanh Vinh district with four specimens seen.

Also of significance was the observation of additional species within local trade. Three *Sacalia quadriocellata* were seen in Khanh Vinh province which represents a large range extension for the species. The observation of *Cuora mouhotii obsti* in Khanh Vinh, Ninh Hoa and Van Ninh also indicates the province also has populations of this endangered species.

There is a need to conduct additional interview surveys in Hon Ba proposed Nature Reserve to determine if *Cuora picturata, Cuora mouhotii* and *Sacalia quadriocellata* occurs in the area and investigate what other species may also occur such as *Manouria impressa* and *Platysternon megacephalum* at higher elevations.

Dak Nong province:
For Dak Nong province relatively few interviews were conducted which may result in some species being overlooked or with limited information. During interviews 14 species were actually observed or described but much of this information came from a wildlife farm in Dak R'Lap district for which specimens were observed that probably came from other locations and for which additional interview information from this survey did not support their inclusion in the provincial results. These included *Mauremys sinensis* (most likely from northern Vietnam), *Sibenrockiella crassicollis, Malayemys subtrijuga* and *Heosemys annandalii.* It is possible that additional surveys in the lower elevation areas to the south within Dak R'Lap and Tuy Duc districts for which only 10 interviews were conducted may be inhabited by these southern species.

Challenges:
In some instances animals at higher trade levels or within farms may have travelled considerable distance and care should be taken before making assumptions on species occurring in provinces. The extreme rarity of species such as *Cuora trifasciata* and *Pelochelys cantorii* made it difficult to see specimens to help confirm presence.

Threats:
What is clear from these surveys is hunting and trade is continuing to decimate any surviving wild turtle populations in the area. Anecdotal accounts also clearly indicate how tortoise and freshwater turtle populations have been decimated throughout the region in recent decades.

In all areas surveys most turtles encountered are collected, many animals are being sold into the wildlife trade, although at some sites, particularly in the highland, turtles are still commonly consumed locally. Extensive networks of traders exist and it seems even the most remote villages are visited almost daily by traders looking to buy turtles and other wildlife. Even species which are protected under national law Decree 32/2006/ND-CP are hunted, traded and consumed within the region with little concern apparent from those involved, specifically *Indotestudo elongata, Manouria impressa, Platysternon megacephalum, Mauremys annamensis* and *Heosemys grandis.* Greater enforcement effort is required both at the protected area level and more targeted enforcement against district and provincial level traders.

Forest clearance near Ngoc Linh Nature Reserve, Dak Glei district, Kon Tum province

"Farms" within the region should also be considered threats to the TFT fauna, with little regulation currently applied to their management it is likely they are still purchasing wild animals. With many turtle species in need of specific environmental or dietary requirements to be maintained and difficult to breed it seems unlikely for some species that animals in these farms are being bred in captivity. For example the 61 *Indotestudo elongata* observed in Dong Hoa district, Phu Yen province, these animals are clearly wild caught, taking between 7-10 years to reach maturity it is extremely unlikely they are being "farmed", more likely these are wild caught animals brought kept for a short time before being sold on. But without individual animal marking and monitoring techniques provincial or district permissions for farms are providing them with a blanket permission to trade as many animals of a species as they like while making violations difficult to

identify. Similarly with *Mauremys annamensis* observed in farms, these animals are breeding but without careful monitoring of farms they could potentially be bringing in new illegal wild caught animals into their captive populations.

Following these surveys a major concern is that although tortoise and freshwater turtle populations are severely reduced from historic levels a high collection pressure has been maintained. As animals have become more rare economic values have risen sharply maintain strong incentives to collect animals. Although hunters may not be going out and targeting turtles in the numbers they were in the 1980's and 1990's in areas where turtle populations are at their strongest active turtle hunters can still be found and some more indiscriminate hunting methods are till taking their toll. For example dogs used for hunting other wildlife or snare traps set with drift fences for small carnivores are also catching turtles and those individuals involved in collection of other forest resources, logging, rattan collection, fishing etc. are unlikely to leave a turtle they opportunistically encounter. For such slow growing and long lived animals this constant net loss to the population is leading to a slow extinction.

Field surveys for critical tortoise and freshwater turtles in central Vietnam.

Location selected for field surveys were based on information obtained from the interviews, Focus was maintained on three priority species, *Mauremys annamensis, Cuora bourreti* and *Cuora picturata,* although opportunities were taken to confirm additional species at all sites. This is particularly relevant within habitat of the *Cuora* species as the high quality evergreen forest they are dependent on supports an abundance of tortoise and freshwater turtle species.

Survey techniques applied.
- Nonlethal aquatic trapping, collapsible funnel traps were used to survey for aquatic species with approximately 20 traps set and baited with a mixture of fish rotting meat and fruit. These are particular useful for surveys of *Mauremys annamensis*.
- Time search transects, this technique involves using a team of staff and local guides to walk timed straight line transects through suitable forest habitat making observations for cryptic species.

- dog surveys, the use of hunting dogs is one of the most efficient ways to find terrestrial species, without which it can be extremely difficult to find these relatively small and well camouflaged animals. As part of this project a team of dog trainers from the UK, specializing in training police and army dogs, held a two week training course in Vietnam on the training of turtle survey dogs. These dogs were then used in field surveys. Due to the mix results with the survey dogs at some locations additional groups of local hunting dogs were also utilized.

For all animals encountered standardized field record data collection forms were completed, DNA collected, animals notched with individual identification numbers before their release at the capture site.

Field surveys for the Vietnamese Pond Turtle (*Mauremys annamensis*).
From results of the interview survey locations have been identified where the species is believed to still occurring awhile in small numbers. Habitat loss has been significant for this species, in addition its high economic value has sustained a very high collection pressure where ever the species survives. Sites were identified in Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Dak Lak and Gia Lai province.

Traps were placed in suitable lowlands wetland or pond areas and check daily in the early morning. In all 12 tapping surveys were completed in six districts of five provinces with a total of 92.5 days. With between 16 and 25 traps at each location the total number of trap days (number of traps x number of days surveying) was equivalent to 1916.5 traps days during which 11 endangered *Mauremys sinensis* were caught, this represents the equivalent of 0.0057 turtles per trap day. Such a low tapping me is a clear indication of how reduced total population are in most of these lowland wetland areas. An even greater concern is that at five sites survey know turtles

were caught at all, all 11 animals were caught at a single site in Binh Son district, Quang Ngai province. All animals caught were either juvenile or sub-adults with no adult animals encountered.

The confirmation of *Mauremys sinensis* in the wild in Quang Ngai province is also note worthy as this represents a range extension of the species south from Quang Nam province.

Table of survey location for the Vietnamese Pond Turtle and result

Survey period	Province	District	Location	# Trap days	# of Traps	Trap* days	Turtles caught
22-31 July 2009	Quang Nam	Dien Ban	Ha Tre Lake, Cam Phu village	10	20	200	0
22-31 August 2009	Quang Nam	Que Son	Khoai pond, Kiem Lam town	10	20	200	0
22 November - 1 December 2009	Quang Nam	Dien Ban	Morning glory pond, Dien Minh commune	10	20	200	0
16-25 June 2010	Binh Dinh	Tay Son	Phu Phong Town,	10	20	200	0
15-25 December 2010	Phu Yen	Tuy An	Hoi Phu Lake, Hoi Phu Village, An Ninh Tay Commune	10	18	180	0
17-23 April 2011	Dak Lak	M'Drak	Cu Kroa Commune,	8	16	128	0
8-15 September 2011	Quang Ngai	Binh Son	Ho Da Lake, Binh Khuong Commune	8	17	136	5 *Mauremys sinensis*
15-20 April 2012	Quang Nam	Dien Ban	Co Nhi River, Cam Dong village, Dien Phong commune	8	17	136	0
17-23 December 2012	Quang Ngai	Binh Son	Ho Chuoi Lake, Binh Khuong Commune,			80	0
21-27 January 2013	Quang Ngai	Binh Son	Ho Sao Lake, Binh Minh Communes,	5.5	25	137.5	3 *Mauremys sinensis*
18-25 April 2013	Quang Ngai	Binh Son	Ho Sao Lake, Binh Minh Communes	7	25	175	3 *Mauremys sinensis*
18-24 June 2013	Quang Ngai	Binh Son	Ho Sao Lake, Binh Minh Communes	6	24	144	0
			Total	**92.5**		**1916.5**	**11**

The previous understanding of the Vietnamese Pond Turtle, *Mauremys annamensis,* was that the species is extremely endangered, indeed it is currently listed high on the top 25 most endangered turtle species in the world by the Turtle Conservation Fund (TCF). This is something reinforced both by the interview and field surveys conducted as part of this project, although 100 individuals were observed during interviews most of these, 72 of these were at two farms and one household who have been collecting the species for a number of years. One of the best locations identified through strong interview information and the observation of 13 individuals in local households was Binh Son district, Quang Ngai Province. This is also the site selected for the establishment of a Species Habitats Conservation Area (SHCA) as part of the CEPF grant.

Continue monitoring through both interview and field surveys of all the sites is recommended. While the development of additional community awareness and enforcement activities will be critical to protect any remaining turtles that may survive.

Radio telemetry study:
With the opportunity at the Binh Son district site to further study the Chinese stripe-necked turtle, *Mauremys sinensis,* a radio telemetry project was also started in January 2013. This initially included the attachments of three radio transmitters to sub adult animals captured to allow a more detailed study of habitat use of the species within a fragmented environment. In particular to determine seasons or habitats in which the species might be exposed to more significant risk of hunting and collection. Already results have been interesting, with one individual making a considerable migration over one week from a relatively safe wetland area through the middle of a rice field to a small stream area where it then spent the next few weeks in close proximity to both of the village and rice field which were being planted.

Photographs from radio tracking in Quang Ngai province

Above left: One Mauremys sinensis included in the radio tracking study

Above right: Sunrise over Ho Sao Lake during trapping in Quang Ngai province

Bottom right: team radio tracking in Binh Son district wetland

Field surveys for forest dependent species.

Field surveys undertaken in central Vietnam forest was primarily focused on low to mid elevation primary broadleaf evergreen forest. The focal species were *Cuora bourreti* and *Cuora picturata* but the sites also had the potential for other forest dependent species including *Platysternon megacephalum, Cuora bourreti, Cuora picturata, Cuora mouhotii, Cuora trifasciata, Cyclemys oldhamii, Cyclemys pulchristriata, Sacalia quadriocellata, Indotestudo elongata, Manouria impressa, Palea steindachneri* and *Amyda cartilaginea* depending on the location. Field teams used local guides to reach habitats for the focal species before conducting surveys from 4 to 7.5 days in the field using aquatic trapping, line transects and dog search. At some locations between half a day and a days trek was required to reach remote areas were population were still reported.

Table of forest surveys undertaken in central Vietnam from July 2009 – April 2013

Survey period	***Province***	***District***	***Location/PA***	***# forest days***	***Turtles caught***
9-14/Jul/2010	Quang Ngai	Nghia Hanh	Chi forest in Hanh Tin Dong commune	4	0
15-23/Apr/2011	Dak Lak	M'Drak	Forest in Cu Kroa Commune	7	0
4-11/Jun/2011	Quang Ngai	Ba To	Ba Le Protected forest, Ba Le Commune	7.5	0
29-6/Aug/2011	Thua Thien Hue	A Luoi	Sao La Nature reserve	5	1 x *Cuora bourreti*
17-24/Sep/11	Khanh Hoa	Ninh Hoa	Suoi Mit forest, Suoi Mit Village, Ninh Tay Commune	6	02x *Cuora mouhotii obsti* 01 x *Cuora picturata*
13-16/May/2012	Phu Yen	Dong Hoa	Tha Dau Stream, Lam Sinh Area, Deo Ca- Hon Nua Special Use Forest, Hoa Xuan Nam Commune	4	02x *Cuora mouhotii obsti* 01 x *Cuora picturata*

Forest surveys did confirm two focal endemic species in the wild. In particular Deo Ca – Hon Nua special use forest had strong information for the species and should be considered for protected area status. Sao La Nature Reserve also had *Cuora bourreti* confirmed at the site and with the potential for a range of other species mean high diversity in this site focused TFT research and conservation at the reserve can support existing work by FPD and WWF at the site. Additional sites have also been identified for future surveys.

The team including students from Da Nang university find an endemic Cuora bourreti in Sao La Nature Reserve

Component 2 planned:
Community support gained for tortoise and freshwater turtle species conservation
2.1. Community meetings held in areas surround *Mauremys annamensis* habitat in central Vietnam including community consultations as required
2.2. Community meetings held around forest habitat where *Cuora bourreti* and *Cuora picturata* are confirmed in central Vietnam including community consultations as required
2.3. School programs conducted in priority areas for *Mauremys annamensis, Cuora bourreti* & *Cuora picturata*
2.4. Media workshops help in CVN to increase awareness to priority species and conservation activities.
2.5. Student training courses held in central Vietnam to involve local students in on-going and future conservation activities.

Component 2 actual:

Community activities
Community awareness activities are important part of the work completed by the ATP as part of this project, this is especially true for *Mauremys annamensis* which occurs in Lowland areas which often highly fragmented with significant human populations. Prior to conducting community activities or school programs as part of the project five ATP staff received training in environmental education skills. This included designing and implementing school and community programs with key objective. Training was provided by Education for Nature Vietnam in Hanoi from the 1st to 6th February 2010. This training was essential for providing staff with the necessary skills and confidence to develop and lead awareness activities in central Vietnam.

During the project a number of community activities were undertaken in central Vietnam:

- Community meetings aimed at engaging local communities to discuss priority tortoise and freshwater turtles occurring in their surrounding area were undertaken in 18 villages for 685 participants. The meetings included presentation on species and for *Mauremys annamensis* a video related to repatriation of animals form Hong Kong in 2006 and their conservation. Discussion section involved participation of local communities to present their ideas and understanding on TFT's and population in the surrounding area. Two different programs were developed, one for *Mauremys annamensis* and another for forest dependent species with a focus on Cuora.
- In Quang Ngai province where a focus for *Mauremys annamensis* has been established a novel approach to raise awareness has been successful, with additional community

football matches were held as part of the “Turtle Cup”. The objective of these football matches was to target a difficult to reach demographic within the local community, that of young males. As part of the total football club presentations were given relating to turn consolation, while banners and football shirts all bearing the Vietnamese Pond Turtle and a conservation message ensured all the player understood clearly this was the Turtle Cup. From 23rd – 24th April 2011 eight teams of 64 players over two days of football in Binh Khuong commune. Similar matches were played for eight teams and 56 participants in Binh Minh commune from the 12th – 13th September 2012. With over 400 spectators at the matches in total we hope to develop this activity in 2013 to establish a “Turtle Football Cup” between the two key communes surrounding the proposed SHCA for *Mauremys annamensis.*

Photos of community football matches in Binh Minh commune, Binh Son district, Quang Ngai province.
Photo left: Penalty shoot out in the final match.

Table of community meeting activities in central Vietnam July 2009 – April 2013

Province	***District***	***Commune***	***Date***	***# Villages***	***# Local people***	***Species focus***
Thua Thien Hue	Nam Dong	Thuong Long	13,15-Mar-13	2	100	Cuora bourreti
		Thuong Quang	13-Mar-13	1	32	Cuora bourreti
		Thuong Nhat	14-Mar-13	2	93	Cuora bourreti
Quang Nam	Dien Ban	Dien Phong	28-29-Jul-10	2	54	Mauremys annamensis
		Dien Minh	21-22-Apr-12	2	56	Mauremys annamensis
Quang Ngai	Binh Son	Binh Khuong	1,5,6-Oct-08	3	98	Mauremys annamensis
			23-24-Apr-11	8	64	Mauremys annamensis
		Binh Minh	25,27-Oct-10	2	115	Mauremys annamensis
			12-13-Sep-12	8	56	Mauremys annamensis
Phu Yen	Tuy An	An Ninh Tay	22-Dec-10	1	30	Mauremys annamensis
	Song Hinh	Ea Bar	23,25-Nov-12	2	50	Ma & Cuora spp.
		Ea Trol	24-Nov-12	1	57	Ma & Cuora spp.
			Total		805	

School Programs
School program were design aimed at secondary school children aged 11-15 years. The school program contain a 45 minute lesson on turtle ecology, threats, and important species in their area and a game "Lucky Turtle" that highlights the plight of a turtle through its life in Vietnam with risks of hunting and trade.

Two lesson plans were developed for *Mauremys annamensis* and forest dependent species. In all 153 classes of 4,910 students participated in the school programs. These focused on 5 sites for *Mauremys annamensis,* 1 site for *Cuora bourreti* and 4 sites for *Cuora picturata.*

School program in Phu Yen province, children learn the turtle life cycle and threats through the lucky turtle board game

Table of school program in central Vietnam July 2009 – April 2013

Province	*District*	*Commune*	*Date*	*# Classes*	*# Pupils*	*Species focus*
Thua Thien Hue	Nam Dong	Thuong Nhat	12-Mar-13	6	155	*Cuora bourreti*
Quang Nam	Dien Ban	Dien Phong	16,17,19-Apr-12	11	475	*Mauremys annamensis*
Quang Nam	Dien Ban	Dien Minh	18,20,21-Apr-12	13	564	*Mauremys annamensis*
Quang Ngai	Binh Son	Binh Khuong	27-Oct-10	2	75	*Mauremys annamensis*
Quang Ngai	Binh Son	Binh Khuong	6-7-Jan-11	6	208	*Mauremys annamensis*
Quang Ngai	Binh Son	Binh Trung	27-Oct-10	2	64	*Mauremys annamensis*
Quang Ngai	Binh Son	Binh Trung	4-6-Jan-11	13	493	*Mauremys annamensis*
Quang Ngai	Binh Son	Binh Minh	8-9-Apr-11	16	576	*Mauremys annamensis*
Phu Yen	Tuy An	An Ninh Dong	20-Dec-10	3	93	*Mauremys annamensis*
Phu Yen	Tuy An	An Ninh Tay	21,23-Dec-10	7	270	*Mauremys annamensis*
Phu Yen	Dong Hoa	Hoa Xuan Nam	27-Feb-12	13	277	*Ma & Cuora spp.*
Phu Yen	Song Hinh	Ea Trol	21-22-Nov-12	7	192	*Ma & Cuora spp.*
Khanh Hoa	Ninh Hoa	Ninh Sim	21-23-Feb-12	29	933	*Cuora picturata*
Khanh Hoa	Khanh Vinh	Khanh Binh, Khanh Dong, Khanh Hiep	24-25-Feb-12	25	535	*Cuora picturata*
				153	**4910**	

Media activities
To raise the profile of tortoise and freshwater turtle conservation in central Vietnam a number of activities were undertaken:

-On the 10th March 2010 the opportunity was taken to give presentations to 27 journalists from national media, television and newspapers, during the opening event of the visitor interpretation centre of the Turtle Conservation Centre (TCC), Cuc Phuong National Park. The ATP gave a presentation on activities in central Vietnam and the focus on *Mauremys annamensis* for which an assurance colony is maintained in Cuc Phuong.
- On the 15th September 2010 VTV2 filmed with Tim McCormack in Hanoi about invasive species in Vietnam. The opportunity was taken to highlight the plight of Vietnam's rare endemics, *Mauremys annamensis, Cuora bourreti* and *Cuora picturata.*

- The ATP website was developed, from September 2011 and includes 19 press releases from CEPF activities from July 2009 to April 2013, with additional information and updates still waiting to be added.

Student training course
A long running activity of the ATP is the university student Tortoise and Freshwater Turtle Field Skill Training Course which has run since 2005. During the week long training course a combination of classroom instruction and field exercises, participants are provided with practical skills and experience relating to research and conservation of turtles, including conducting interviews in local communities. Students also learned about the extinction threats facing Asia's turtles, ecology of turtles, map reading and GPS, practical survey and conservation skills and how to identify different turtle species native to Vietnam.

Student training program held in Cuc Phuong national park, March 2010

As part of this CEPF project we focus on participants from central Vietnam. Training was run from the 13th to 20th March 2010, 12th to 19th March 2011 and the 17th to 25th March 2012 with a total of 31 students participating , including 22 participants from central Vietnam including one Ranger from Da Nang FPD, one ranger from Sao La Nature Reserve.

With over 100 applicants annually from up to 28 universities and colleges the training course has proved a popular program, furthermore final year students have been supported in completing research projects or involved in surveys. Many ATP staff are also graduates who originally participated in the training course.

Component 3 planned:
Improved conservation status of priority tortoise and freshwater turtle species and their habitat.
3.1. Establish community patrol teams at priority *Mauremys annamensis* habitat
3.2. Capacity building of local wildlife authorities in central Vietnam
3.3. Support inclusion of CEPF priority species, *Cuora bourreti*, *Cuora picturata* and *Cuora galbinifrons* in Vietnam's principal wildlife protection laws.
3.4. International: Work with National and international Authorities and experts to evaluate whether any further turtle species warrant inclusion in the CITES appendices and other multilateral environmental agreements.
3.5. Establish Species Habitat Conservation Area (SHCA) in central Vietnam for *Mauremys annamensis*
3.5. Award and monitor implementation of sub-grant to WCS for activities in Cambodia, and maintain regular communication with team.

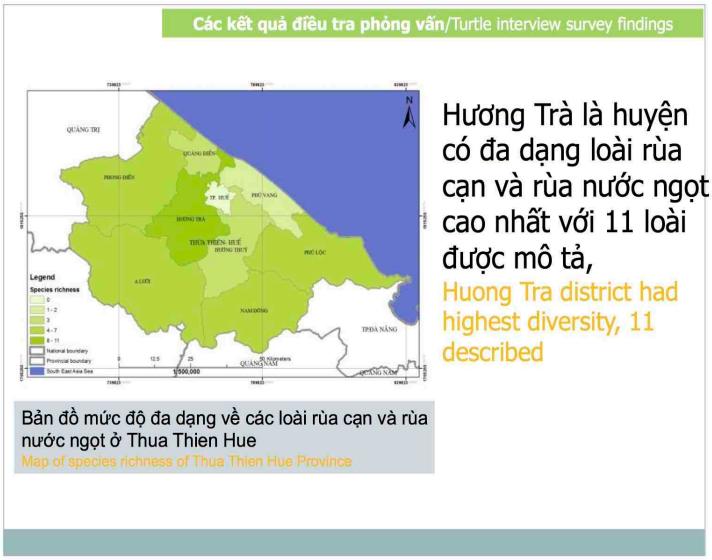
Component 3 Actual at completion:

During the completion of this CEPF project considerable progress has been made to improving the conservation status of prior tortoise and freshwater turtle species and their habitat within the central Vietnam project area.

With a focus on areas for the Vietnamese on turtle we have had part time local counterparts employed at key sites, 3 counterparts in Binh Son district, Quang Ngai province and one in Duy Xuyen district, Quang Nam province. They have been provided with basic training to accomplish tasks such as collecting environmental data at the sites, participating in field surveys as required, and reporting on observations of additional turtles within the community. The local counterparts have worked well as our eyes and ears on the ground at sites where we do not have a permanent full time staff presents as of yet. To date local counterparts have notified us of over 35 animals. Including 11 *Mauremys annamensis,* 7 *Mauremys glyphistoma* hybrids, 12 *Mauremys sinensis* and two *Pelodiscus sinensis* from counterparts in Quang Ngai province and 2 *Mauremys annamensis* and 1 *Mauremys sinensis* of which the *Mauremys sinensis* was transferred to a rescue centre, from Quang Nam province.

Throughout project activity we have established relationships with Forest Protection Departments (FPD) within all 11 provinces due to staff regularly meeting with rangers to prepare surveys and report on findings. From the 4th to 8th of October 2012 three key provinces identify, Phu Yen, Thua Thien Hue and Khanh Hoa, had provincial level FPD training on TFT species. The day long training focused on species identification, laws, and an introduction to the Asian turtle crisis. An additional sections tailor-made to each province were also presented in PowerPoint presentations; these identified important species and priority habitat for protection that had been identified through interview and field surveys conducted by the ATP. It was the intention of this training to focus FPD enforcement on these priority areas or species. Similar training had already been undertaken in Quang Ngai province in 2009. A total of 77 rangers participated in the training, including district level and protected area staff who's improved knowledge can make a real difference on the ground. In Quang Ngai in particular we have established a very positive relationship with FPD as we now have a project office based in Quang Ngai city. FPD in Quang Ngai have made a number of confiscations 19 turtles including six *Mauremys annamensis* January 2009 which were transferred to the rescue centre in Cuc Phuong National Park, an additional 19 *Manouria impressa* were also confiscated by Quang Ngai FPD in the 19th of October 2010, all animals were transferred to the TCC. Rangers from district and provincial level have participated in community and People Committee meetings in Binh Son district and taken a key role in efforts to establish protected habitat for *Mauremys annamensis* in Quang Ngai with one ranger also participating in a one week captive management training course held in Cuc Phuong National Park in October 2012.

Ranger training in Khanh Hoa province, October 2012



Example slide from Hue province presentation showing species diversity within the province

To increase protection status for priority species a number of steps have been taken. For the critically endangered Indochinese Box Turtle group (*Cuora galbinifrons, Cuora bourreti* and *Cuora picturata*) a letter and justification for species up-listing in the revision of Decree 32/2006/ND-CP has been submitted to the Ministry of Natural Resources and Environment (MoNRE) in Hanoi. As part of efforts to reduce international trade in the *Cuora galbinifrons* species group and *Mauremys annamensis* the ATP worked closely with the Wildlife Conservation Society (WCS), Vietnam, and individuals within the IUCN and CITES management authorities of Vietnam in development of a

proposals for the up listing both these species at the March 2013 CITES CoP 16 in Bangkok, Thailand. Within these proposals it was requested that both species be up listed from Appendix II to Appendix I in proposal 33 (*Cuora galbinifrons*) and proposal 35 (*Mauremys annamensis*) submitted by Vietnam. Unfortunately these proposals were not accepted as the species were instead up-listed from Appendix II too Appendix II zero quota as part of larger proposals by the USA and China for which the ATP also signed in support of. These saw up-listing of 43 Asian species, including 11 Vietnamese species. Proposal 32, *Cyclemys pulchristriata, Cyclemys oldhamii* from no listing to Appendix II, *Geoemyda spengleri* and *Sacalia quadriocellata* from appendix III to Appendix II and *Cuora galbinifrons, Cuora mouhotii, Cuora trifasciata, Heosemys annandalii, Mauremys annamensis* from appendix II to appendix II zero quota. A second proposal for softshell turtles, proposal 38, saw *Palea steindachneri* and *Rafetus swinhoei* move from appendix III to appendix II. These changes will significantly limit documented trade within the southeast Asia, however illegal cross boarder trade which likely makes up the majority of turtle trade from Vietnam to China is likely affected little by the up-listings. Inclusion of *Cuora galbinifrons* and *Mauremys annamensis* would have had more significant implications for the species under national law within Vietnam and China and the Vietnam CITES management authority is planning to submit the proposal at future CoP meetings.

International efforts have also been made to raise the profile of priority TFT in Vietnam. From the 23rd to the 25th May 2011 ATP staff participated in the 2nd Turtle Survival Alliance (TSA) and IUCN Cuora workshop held in Gangkou, Gaungdong, China. With 35 participants from 13 countries this focus on identify key conservation needs of the Cuora genus.

Creation of a Species Habitat Conservation Area for turtle conservation in Vietnam
A major undertaking of this project has been to try and establish a new Species Habitat Conservation Area (SHCA) for the Vietnamese Pond Turtle, *Mauremys annamensis,* within its natural range. It is the intention at this site to also concentrate on captive breeding for assurance purposes of the species, utilizing animals already bred in captivity in Vietnam and additional animals returned from Europe which will arrive in 2013.

Initially we hope that suitable habitat could be found in an unpopulated area on government land that could be allocated for management under the Forest Protection Department (FPD) for Conservation. Working closely with Quang Ngai provincial FPD we made a review of potential sites for such a conservation area. Our efforts confirmed that the locality in Binh Son District where 13 local trade records for *Mauremys annamensis* had the most suitable and largest remaining habitat. A 400 ha block was identified where three legs lakes and wetland streams with good boggy habitat remain surrounded by low rolling hills used for plantation forest, largely acacia on rotation with cassava. Despite our early efforts to have land allocated by the People's committee it became clear that landownership in the area was complicated, with many households utilizing the land without any clear land ownership. As such a grant was secured in 2012 from the IUCN Netherlands Small grants for the Purchase of Nature (SPN) to make funds available to compensate households for land to acquire it for a conservation area. The project has initially been developed in partnership with the local NGO, Education for Nature Vietnam (ENV) but as the project has developed we are now also working with the Southern Institute of Ecology (SIE) who have existing experience on similar projects and work in closely related fields to the ATP.

To date activities on this project have included:

- Meetings with local land users, peoples committee and FPD to discuss development of the project and seek initial approval. 15 meetings to date.
- Mapping company hired to produce 1:2,000 maps of a 153 ha area in which core remaining habitat is located. This involved 104 individual land users in mapping the land plot boundaries in the site for the first time.

Many of the community and education activities undertaken by the ATP as part of this project have focused on two communes surrounding the proposed SHCA. This has been to establish a strong presence at the site and gain community support prior to development of any consolation area. These activities are discussed in more detail in the section below.

Ho Sao Lake in Binh Son district, Quang Ngai province, part of the proposed conservation area

As of the end of this project this activity is still ongoing, it is hoped that we will reach a positive conclusion by the end of 2013. This would represent the first purchase of nature for conservation in Vietnam and would potentially open the door for additional such projects in the future.

An important undertaking has been the development and establishment of a skilled team of national turtle conservationists in Vietnam. Training courses have included:
- Training of 5 staff in basic GIS skills, including ARCmap and QGIS from the 9th – 15th of April 2010.
- Training of survey dogs, from the 30th – 11th May 2010 a team of five British dog trainers came over and trained seven staff in handling and training of dogs for surveys focused on turtles, dogs have had a number of successes since finding both *Cuora galbinifrons* and *Cuora mouhotii* in the wild.
- Environmental education training, from the 1st to 6th February 2010 five staff were trained in development and implementation of education activities.

Component 4 Planned:
Priority conservation actions taken by WCS for *Batagur affinis* populations in Cambodia
4.1. Field surveys will be conducted to identify suitable Batagur habitat
4.2. Community patrols will be established for *Batagur affinis* river and nesting beaches
4.3. Augmentation of *Batagur affinis* populations through head-starting activities

Component 4 Actual at Completion:

***Batagur affinis* conservation in Cambodia.**

Field surveys for additional *Batagur affinis* habitat in Cambodia
This component was replaced with a research component in which a satellite transmitter was attached to a wild caught 34kg female *Batagur affinis* which was handed in during April 2011. This tracked animal gave an insight into the movements of the species within a larger habitat area with additional information below.

Patrols and monitoring of nesting beaches.
In Cambodia activities focused on the critically endangered Southern River Terrapin, *Batagur affinis.* Prior to this project only a handful of reproductive females remained on the Sre Ambel River, Kho Khong province with a maximum of only seven nest located a year. Since 2002 activities by WCS Cambodia had started joint patrols by the Fisheries Administration and community rangers, by 2008 this had resulted successful protection of 24 nests with 328 eggs of which 221 successfully hatched, of these

Adult Batagur affinis in captivity

hatchling were released back into the river while 94 were placed in a head-starting facility for long term captive breeding of the species.

As part of the CEPF project here community patrols were increased and undertaken weekly to provide additional protection on the river and to focus efforts during the nesting season on locating nest sites. During 2007-2008 no nests had been located on the river. As a result of CEPF activities a single nest was located in 2009 which resulted in 23 hatchlings. By December 2012 8 nests with 106 eggs were located resulting in 49 hatchlings, a significant increase to the total of head-started turtles representing 19.6% of the total head-started population.

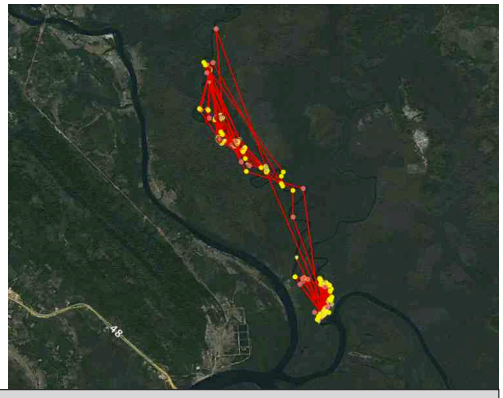
Patrols and monitoring also saw six *Batagur affinis* confiscated (2) or returned (4) from locals who had caught animals in the Sre Ambel River. This included a 34kg female that was caught by a local fisherman in April 2011 and handed in. A satellite transmitter was attached to this animal and she was released as part of a monitoring project to determine which sections of river she prefers. This *Batagur affinis* was released in January 2012 into the Kaong River with an awareness ceremony involving the Director-General of the Fisheries Administration, provincial authorities, monks, students, local villagers, rangers and the media. Patrols and monitoring was also increased at locations where satellite information identified the female was spending time.

In 2012 as part of improvements to patrolling and monitoring of the species and the Sre Ambel river area training was provide on GPS and data collection to improve quality of records to be

integrated into SMART software. By the end of 2012 community patrols have started stopping illegal activities, removing fishing equipment prohibited under Cambodian law.

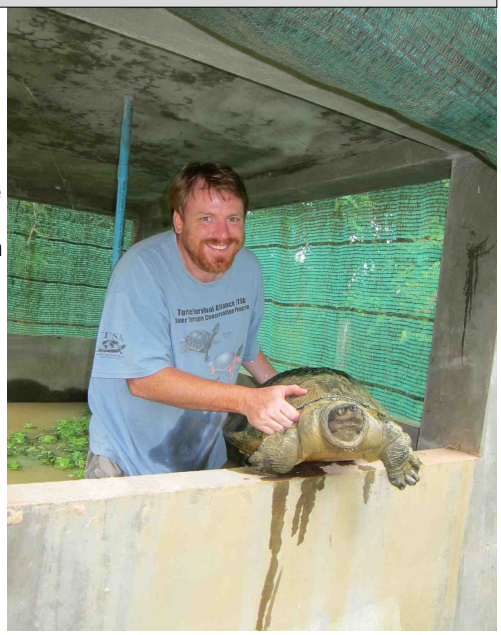
A major development at the end of 2012 was the discovery of four nests of 155 eggs, which appear to be of the endangered Asian giant softshell turtle (*Pelochelys cantorii*), and two *Batagur affinis* nests. This would represent the first documented nesting of *Pelochelys cantorii* on the Sre Ambel river and add a second endangered turtle species in need of conservation to the project site.

Images from the Batagur project in Cambodia



Top Left: An adult female Batagur affinis handed in by a local fisherman is released during a ceremony with a satellite transmitter attached
Top Right: Post release the transmitter gave new insight into the activity and home range in the species.
Bottom Right: A female Batagur affinis returned to Cambodia from Vietnam in October 2012

Augmentation of a captive assurance colony.



The captive assurance population has also been significantly increased and will likely play a key role in long term survival and recovery of this critical population. An additional 42 head-started animals were added to the existing population largely composed of hatchlings from previous years. The captive population now stands at 136 individuals, 22 juvenile males, 62 juvenile females and 49 juveniles of undetermined sex and one adult male one adult female. Once the juveniles reach reproductive age we expect to see a significant increase in hatchlings been produced of which a proportion can be released back to the Sre Ambel river.

The water supply to the captive population was also improved through a 3,000 litre water tank on a tower with a solar pump ensuring clean water is available throughout the year.

A partnership was also established with the Angkor Centre for Conservation and Biodiversity (ACCB) in Siem Reap to establish a second captive assurance colony for *Batagur affinis* at the centre.

Return of a *Batagur affinis* from Vietnam
Through collaboration with Education for Nature Vietnam (ENV) a local NGO in Vietnam a 46kg adult female *Batagur affinis* found in Suoi Tien Cultural Tourist Park in Ho Chi Minh city was

transferred to the ACCB centre in Cambodia in October 2012. This was an important result not only showing international cooperation in conservation of such an endangered species, but also providing this female the opportunity to breed and provide important additional genetic stock to the limited population in Cambodia.

Were any components unrealized? If so, how has this affected the overall impact of the project?

Some components are still ongoing, for example 3.1, the establishment of a Species Habitat Conservation Area (SHCA) in central Vietnam for *Mauremys annamensis.* This activity has taken considerable time and resources to develop as the habitat requirements of this species being lowland wetland are some of the most populated and therefore challenging to conserve. We have worked extensively with the provincial FPD in Quang Ngai province and have now secured approval to move forward to offer compensation to local households through a local partner, the Southern Institute of Ecology (SIE). Although not yet completed this component is continuing and would represent the first land purchase for conservation in Vietnam by an NGO.

Component 4.1, field surveys to identify suitable Batagur habitat was also changed to undertaken satellite tracking of the species to determine habitat use as it was considered this would provide information on habitat use and possible additional habitat areas opposed to surveys for this already very rare species.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.

Standard guidelines for staff on completion of surveys was produced to assist in the surveys. PowerPoint presentations were prepared for student training activities, media events and FPD training. At least 19 press releases were produced as a direct result of this CEPF grant and made available on www.asianturtleprogram.org.

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.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

The design of this project was originally a collaborative regional proposal written by Conservation International (Cambodia) WCS (Cambodia) and the ATP of CZS (Vietnam), with support from additional global turtle experts including members of IUCN and the Turtle Survival Alliance (TSA). For implementation the CI component was implemented independently of the ATP – CZS/WCS components As such the overall objectives of the project were clear and developed well in support of regional objectives and priorities species. As such the project design process work well in supporting a successful project.

One consideration should be the rapid changes of priorities within the region, some of which were not reflected in the original CEPF priority species in the investment strategy, most notably *Batagur affinis.*

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

The project was well implemented with all activities either completed or changed to take advantage of changes in situations within the project. For example the additional of the satellite

transmitter study of *Batagur affinis* was taken to determine home range of the species outside of the known nesting site areas in replacement of interview surveys in neighbouring river systems.

The strategic approach to implementing project activities, interview surveys followed by field surveys and focused awareness and training activities contributed to the success of this project. Allowing limited time and resources to be spent on priority sites identified.

In Vietnam a strong team ensured that despite extensive periods of field work activities were completed in all 11 focal provinces. Although one challenge has been the securing of long term staff in central Vietnam, specifically living in Quang Ngai office. A number of staff have left to return home to Da Nang of Ho Chi Minh after living for a few years at the site, this is likely to remain a challenge unless qualified local staff can be employed.

Other lessons learned relevant to conservation community:

The process of applying for permissions remains a challenge in some central highland provinces, especially for international involvement in projects. Gia Lai and Binh Dinh provinces in particular. Although surveys could be undertaken by national staff these restrictions still will pose limitation to the establishment of long term projects in some provinces.

The ongoing hunting and trade in tortoise and freshwater turtles throughout the project site remains the greatest threat to all species in the area. The apparent continued depletion of remaining populations in recent years continues to reduce the effectiveness of conservation activities. Field surveys, research and awareness activities would appear futile unless the larger issue of illegal hunting and trade are not addressed, populations are likely to continue their decline towards extinction without governmental support in this respect.

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
CZS	B	6,000	Core support provided from CZS USA, finance and management
CZS	A	4 0,000	Core funding, Hanoi office, finance and admin staff, program coordinator support and central Vietnam staffing
TCF	A	5,000	Support of survey and awareness activities for *Mauremys annamensis*
USFWS	A	10,000	Support of development of SHCA and awareness relating to *Mauremys annamensis*
WCS	B	32,000	Core support for staff in Cambodia, finances and management
TSA	A	15,000	Technical expert support covering design and implementation of Batagur project
MBZ	A	5,000	Support of field surveys for Cuora species in central Vietnam

Additional funding should be reported using the following categories:

- ***A*** *Project co-financing (Other donors or your organization contribute to the direct costs of this 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 funded 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

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

The support made through this CEPF investment has been critical in supporting real conservation efforts on the ground in central Vietnam and for *Batagur affinis* in Cambodia. It has enabled the Vietnam program to grow considerably in terms of capacity and program reach. We have now achieved substantial awareness amongst local communities and key sites and for wildlife projection authorities in priority provinces. Through the skills gained in designing and implementing both survey and awareness activities amongst the team in will now be considerably easier to implement such activities in the future.

Through the successful completion of this project and support received from CEPF we have also been able to leverage additional support for activities in central Vietnam. One such example is the establishment of a conservation area for the Vietnamese pond turtle, a grant from the IUCN Netherlands SPN has been received to support this establishment through compensation of local households for land within the area.

Summarize any unplanned sustainability or replicability achieved.
We have also developed a number of strategic partnerships during the CEPF project period with local partner NGO's including the Centre for Natural Resources and Environmental Studies (CRES) and the Southern Institute of Ecology (SIE). Through undertaking program activities with such similar focused national NGOs and institutions we hope to complement and support conservation activities in the region. The ability to collaborate and in particular share skills should ensure improved capacity and returns on activities while reducing the need to expand the existing staff of the ATP, increasing sustainability of the program.

Safeguard Policy Assessment

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

Within all provinces surveyed in central Vietnam ethnic minorities are present. However at sites where information collection through interview and field surveys have been undertaken no direct impact on local communities has resulted.

In Quang Ngai province at the site of the proposed Species Habitat Conservation Area (SHCA) no ethnic minorities are present as the area is between lowland and highland in Binh Son district. However at this site some community meetings have been held to discuss the development of the conservation area. A major component of this project to date has been the mapping of the proposed conservation area, approximately 130ha, during which all those using the land participated with the mapping company to determine boundaries of areas they either own or are using illegally. In July 2013 work will be started to hold consultations with individual households to discuss compensation before any land is acquired.

Additional Comments/Recommendations

Information Sharing and CEPF Policy

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, and publicized in our newsletter and other communications.

Please include your full contact details below:

Name: Timothy McCormack
Organization name: Asian Turtle Program (ATP), Cleveland Zoological Society
Mailing address: PO Box 179, Hanoi central Post Office, Hanoi, Vietnam
Tel: +84 (0) 4 3514 9750
Fax: +84 (0) 4 3519 0383
E-mail: tmccormack@asianturtleprogram.org

*****If your grant has an end date other than JUNE 30, please complete the tables on the following pages*****

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** 1 July, 2012 to 31 March, 2013 **(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.	N/A			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?	N/A			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.	N/A			
4. Did your project effectively introduce or strengthen biodiversity conservation in	N/A			

management practices outside protected areas? If so, please indicate how many hectares.				
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	N/A			

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

Table 1. Socioeconomic Benefits to Target Communities

Please complete this table if your project provided concrete socioeconomic benefits to local communities. List the name of each community in column one. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes. In the bottom row, provide the totals of the Xs for each column.

Name of Community	**Community Characteristics**								**Nature of Socioeconomic Benefit**												
	landow	nc	eth nic	om adi	mig ran	co mm	ng bel ow	Other	Increased Income due to: sustainable natural resources management	Ecotourism revenues	Park management activities	Payment for environmental services					Other				
Total																					

If you marked “Other”, please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit: